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1999
REPORT ON OHIO
MINERAL INDUSTRIES
WITH
DIRECTORIES OF REPORTING
COAL AND INDUSTRIAL MINERAL OPERATORS



STATE OF OHIO
Bob Taft, Governor
DEPARTMENT OF NATURAL RESOURCES
Samuel W. Speck, Director
DIVISION OF GEOLOGICAL SURVEY
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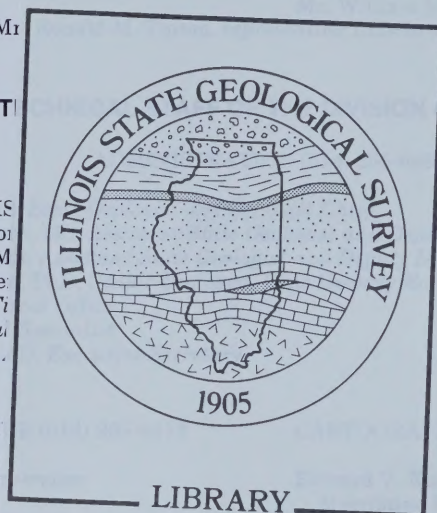
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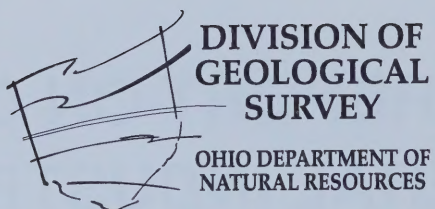
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Cover photo: Asphalt paving machine and roller immediately east of the Sawmill Road and I-270 interchange in northern Franklin County. The new asphalt is being installed by The Shelly Company as part of the massive I-270 reconstruction project. Pictured are roller operator Phil Brower, paving machine operator Morgan Gibbons, and helpers Mike White, Tim Rhoads, and Jackson Shafer. Project foreman is Ed Wilson (not pictured).

PREFACE

For almost four months this past summer, roadway expansion and construction almost made me a prisoner in my own neighborhood. To get out onto the main highways, I had to weave my way through the area by a convolute and circuitous route. Once out on the larger highways, the challenge of the orange barrels was there to greet everyone. Travel time to my office has tripled during this extended time of highway improvement. In my 44 years of driving experience, I don't think I have ever seen so much construction as we have had in Ohio's major metropolitan areas. But, in spite of the inconveniences, our mobility and ease of travel will be vastly improved.

What most of Ohio's traveling population does not realize is that most of the aggregate used in expanding our highway systems comes from nearby quarries and sand and gravel operations that are part of the state's rich mineral heritage. This report on mineral production for 1999 shows that the value of limestone and dolomite was \$361.3 million. The value of sand and gravel produced in 1999 was \$264.4 million. Ohio has a very healthy aggregate industry. And as we travel a much-improved highway system, we should be grateful that we have abundant aggregate resources.

Although Ohio has abundant aggregate resources, a grave concern is the growing opposition to opening of new pits and quarries. Suburban expansion, rapid construction of new housing developments and shopping centers, and creation of more golf courses are making it more and more difficult to locate sites for new mines. Interest in farmland preservation also constrains additional mining operations. Ohio urgently needs to identify prime mineral-resource areas and set them aside for future mining. We should not be making land-use decisions that exclude mining. Geologic maps should be consulted to identify prime mineral-resource areas, and local government officials need to develop long-term land-use plans that include mining rather than excluding it. Without pits and quarries, we will not have access to the raw materials needed to build highways and other components of our modern infrastructure. Smart and sustainable growth in our society should include multiple and sequential use of prime mineral-resource areas to benefit all citizens.

Thomas M. Berg
State Geologist and Chief

FOREWORD

Change best describes the Ohio mineral industry in 1999. The Clean Air Act Amendments of 1990 and low prices challenge the Ohio coal industry's ability to adapt to changing market conditions. Consolidation continues in the Ohio aggregate industry as large multinational and leading U.S. companies seek to gain market share. Ohio clay, shale, and gypsum mines are producing at capacity to meet strong residential and commercial demand. Oil and gas prices have rebounded from historic lows, fostering cautious optimism in Ohio's petroleum industry.

Change was evident when the Ohio Senate approved H.B. 601 creating a new, consolidated division within the Ohio Department of Natural Resources, the Division of Mineral Resources Management (DMRM), to regulate Ohio mineral and fossil fuel extraction. H.B. 601 combines the Division of Oil and Gas and the Division of Mines and Reclamation into a new, more efficient, and responsive agency. Mike Sponsler was named chief of DMRM, coming to Ohio from Indiana with impressive credentials.

This year's article, "Warranties on highway pavements—Ohio aggregate suppliers to test uncharted waters," by Pat Jacomet, Director of Technical Services for the Ohio Aggregates & Industrial Minerals Association, highlights changes the Ohio aggregate industry is experiencing. Ohio now has one of the most comprehensive highway warranty programs in the nation. A well-trained workforce becomes even more important in meeting the warranty requirements. We thank Larry Shively of The Shelly Company and Scott Wilson of Shelly Materials, Inc., for their cooperation in obtaining the photograph on the cover.

Electronic filing of mineral industry reports is under development. We are still experimenting with making the *Report on Ohio mineral industries* available on CD-ROM. An excellent start has been made on compiling e-mail addresses to facilitate communications with industry.

Speaking of change, as always, your suggestions for future improvements to the *Report on Ohio mineral industries* are welcome. We hope to continue the tradition of providing a continually improved annual report that is useful to both the public and industry.

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WARRANTIES ON HIGHWAY PAVEMENTS—OHIO'S AGGREGATE SUPPLIERS TO TEST UNCHARTED WATERS

by Patrick A. Jacomet, Director of Technical Services
Ohio Aggregates & Industrial Minerals Association

INTRODUCTION

Mineral aggregates are major components of highway paving materials. In Ohio, mineral aggregates are crushed limestone, dolomite, and sandstone; sand and gravel; and slag (a by-product of steel manufacturing). In fact, aggregates account for approximately 95 percent of asphalt mixes (by weight) and 65-75 percent of portland cement concrete (by volume). Aggregates are also by far the most inexpensive material in these paving products. The Ohio legislature passed a law in February 1999 requiring that a percentage of Ohio's roads be constructed with a warranty attached. Similar to the three-year or 36,000-mile parts and labor warranty on your personal vehicle, the highway-paving contractor now, in essence, *guarantees* that the pavement will not fail or the contractor will fix it at his expense.

Ohio is leading the way nationally in highway-pavement warranty projects. Ohio's experiences will be closely watched by transportation agencies in other states. This article explores the history of warranties, reviews Ohio's warranty requirements, and addresses some of the possible problems or pitfalls associated with warranties. The most obvious question for an aggregate producer is, "If the pavement doesn't last for the required period of time, what are the aggregate producer's liabilities?"

A LAW IS BORN

In February 1999, the 122nd Ohio General Assembly passed House Bill 163, the Transportation Budget Bill, which required that 10 percent of the 2000/2001 biennium budget for highway construction projects include a warranty on surface pavements. The initiative for a warranty provision developed quite rapidly, much to the surprise of the construction industry. The warranty initiative was in response to several experimental paving projects that failed prematurely and required early repair. In addition, the central Ohio area experienced one of the worst winters in

recent years in regard to freeze-thaw cycles, which took a toll on area highways. One of the most prominent failures occurred on a heavily traveled section of Interstate 270 in the Columbus area while the Ohio legislature was in session. The warranty language provisions were attached to the existing Ohio Department of Transportation (ODOT) biennium budget, which typically passes very quickly in order to meet a March deadline for federal matching funds. The law specifies that, for selected projects, warranties be provided by the highway-paving contractor for a period of seven years for new pavement construction and major pavement rehabilitation and a period of five years for minor pavement rehabilitation.

WRITING THE PAVEMENT WARRANTY SPECIFICATIONS—AN INDUSTRYWIDE COOPERATIVE EFFORT

Given the speed at which the budget and its warranty provisions were passed, writing the highway-pavement warranty specifications that would guide ODOT and the construction industry through the next two years was critically important. Because the law required that 10 percent of the budgeted pavements include warranties, it was imperative that these high-profile projects be carefully chosen and constructed. ODOT quickly appointed Dave Powers, ODOT Central Laboratory Bituminous Engineer, to head up the monumental task of coordinating this initiative. Mr. Powers directed over 50 meetings with industry, the Federal Highway Administration, and other interested parties to discuss details of the pavement warranty specifications.

There was much give and take as discussions continued. The majority of the debates involved warranty failure parameters, that is, what types of distresses would be measured and to what extent and what level of accuracy, and just what is failure and how much can be tolerated before performance and safety are compromised. Legitimate, measurable parameters had to be established, as well as a plan for data gathering and failure assignment.

It became apparent early in the negotiations that there was a lack of data about the proposed failure criteria and the corresponding measurements. Some of this lack of information could be attributed to the methods of measurement that were used in the past. Some of the older pass/fail specifications did not meet the level of accuracy that is achievable with today's equipment. For this reason, it was difficult to set stringent failure parameters. Realizing that they had to begin somewhere, the warranty authors decided that the most complicated pavement-warranty specification, that for asphalt concrete pavement, would be tackled first. If it could be conquered, the other specifications would follow more swiftly.

CONSTRUCTING THE WARRANTY SKELETON

There are two types of pavement. (1) Asphalt concrete—also called asphalt, asphalt cement concrete, blacktop, hot-mixed asphalt, and flexible pavement—generally is defined as a paving material that consists of asphalt binder and mineral aggregate. The asphalt binder, also called asphalt



Portland concrete paving in progress. The concrete is transported from the mixing plant by truck. Photo courtesy of the Ohio Ready-Mixed Concrete Association.



Compaction and attention to detail are critical to asphalt-pavement longevity. Pictured here working on Interstate 270 in northern Franklin County are roller operator Phil Brower and helpers Mike White, Tim Rhoads, and Jackson Shafer of The Shelly Company. Photo by Michael D. Williams, Ohio Department of Natural Resources.

cement, is a petroleum/hydrocarbon material that serves to glue mineral aggregate particles into a dense mass and to waterproof the mixture. When bound together, the aggregate acts as a stone framework or skeleton that strengthens and solidifies the system. (2) Portland cement concrete is similar to asphalt concrete in that it uses mineral aggregate as its major component. However, the "glue" that holds portland cement concrete together is, obviously, portland cement, a material derived from limestone, dolomite, clay, and shale. Aggregate, portland cement, and water (which activates or hydrates the cement), combine to form a rigid or inflexible pavement.

Asphalt performance is highly affected by climatic conditions and road salt and, more than any other widely used paving material, depends on a multitude of factors to maintain satisfactory performance. Portland cement concrete also is affected by climatic conditions as well as by road-salt use. Because of the number of elements affecting asphalt and asphalt performance, asphalt concrete pavement was the first pavement-warranty specification to be tackled. Initially, there were many more questions and "what ifs" than there were answers. The warranty authors knew what they did not want in terms of pavement distresses, but had a difficult task in determining how much was too much. It became readily apparent that the best approach was to look at the specifications used at transportation agencies in other states. These specifications were then combined with past experiences, sound science, and engineering judgment to develop Ohio's warranty specifications. Also, it was known that a certain amount of surface distress is to be expected, and, because of the nature of the climatic conditions in the Midwest, is inevitable. Thus, parameters were set that were perceived to be achievable and, most importantly, measurable.

THE WARRANTY SPECIFICATIONS—WHAT MAKES A GOOD PAVEMENT?

The specifications for highway pavement warranties concentrated on surface distresses that affect safety and longevity. For asphalt, distresses include cracking, disintegrated areas, flushing, and rutting. For portland cement concrete, distresses include cracking, disintegrated areas,

and faulting. Each of these parameters is summarized below. The specifications are described in detail in the Ohio Department of Transportation Warranty Supplemental Specifications (880, Asphalt Concrete with Warranty; 884, Concrete Pavement with Warranty). The specifications can be viewed on the ODOT Web site at <http://www.dot.state.oh.us/CONTRACT/warranty.htm>. They also can be viewed on the Web site of the Ohio Aggregates & Industrial Mineral Association at <http://www.oaima.org>.

Cracking—Cracking can occur as a result of a variety of material and climatic factors. Cracking allows water to penetrate the surface of the pavement. Because water expands slightly during freezing, this moisture acts as an expansive force that shoves the pavement as the moisture seeks room to expand. Continued cycles of freezing and thawing can eventually destroy the pavement surface. To repair excessive cracking, the contractor must rout and seal the distressed areas or, in extreme cases, remove and replace the entire area. Most cracking can be controlled by proper construction methods such as proper joint construction in asphalt and adequate joint spacing in portland cement concrete. Because asphalt is a flexible pavement, simply preventing water from infiltrating the pavement generally is sufficient to prevent cracking. However, the asphalt cement (the black, sticky, petroleum-based glue) can contribute to cracking. Portland cement concrete, on the other hand, is a rigid pavement and *will* crack. Control joints in portland cement concrete serve to buffer this problem by dictating *where* the pavement will crack.



Cracking in portland cement concrete pavement eventually leads to severe pavement failure if left untreated. From Distress Identification Manual for the Long-Term Pavement Performance Project, Strategic Highway Research Program, National Research Council, National Academy of Sciences, 1993. Used with permission.

Disintegrated areas—More commonly known as "potholes," this commuters' nemesis is the result of water infiltration and freeze-thaw conditions. Potholes are common in the Midwest because of our highly variable weather and severe temperature swings. It is often said, "If you don't like the weather in Ohio, just wait an hour." In dry, arid areas of the country, as well as areas that remain frozen for extended periods, potholes are not prevalent. Again, proper joint construction in asphalt and portland cement concrete is critical to minimizing this inevitable occurrence.

Rutting—Rutting is unique to asphalt and is the result of the reorientation of aggregate particles combined with



Rutting of an asphalt pavement and resulting ponding. From Distress Identification Manual for the Long-Term Pavement Performance Project, Strategic Highway Research Program, National Research Council, National Academy of Sciences, 1993. Used with permission.

asphalt's inherent flexibility. Heat and loads in excess of those for which the pavement was designed are the major contributing factors. Besides being aesthetically displeasing, rutting can lead to dangerous ponding of water and hydroplaning conditions.

Flushing—Flushing, another distress unique to asphalt pavements, is the migration of the asphalt binder to the surface of the pavement. This condition creates a dangerously slick situation and must be immediately remedied, generally by covering the affected pavement with a suitable surface treatment. One common solution is to add a thin layer of asphalt to cover the flushed surface. Slurry Seal, a thin layer of aggregate and asphalt emulsion, also is a good solution because it can be placed quickly so the surface is ready for traffic.

Faulting—Faulting is associated with portland cement concrete and results from the differential settlement of one slab of concrete in relation to an adjacent slab. This differential creates a ridge or bump in the pavement. Again, portland cement concrete's rigidity and strength contribute to this condition. Proper construction techniques, including proper compaction of the sub-base and proper joint construction, generally can help avoid this type of surface distress.

All of the above distresses are to be monitored for warranted pavements on a yearly basis by an ODOT District Review Team (DRT). The DRT will be responsible for measuring and recording any pavement defects that might occur throughout the life of the warranty. The DRT members will be trained in pavement distresses, in particular, how to identify them and how to measure them. After the yearly review, the DRT will issue a report of the findings to the highway pavement contractor. Industry was very insistent that all interested parties be allowed to witness the yearly review. It was felt that in order to improve performance, it is important to know by what methods that performance was being measured. Thus, the specifications were written to allow observation by interested parties.

DEALING WITH PAVEMENT DISTRESSES AND FAILURES

The highway-pavement contractor is responsible for all remedial actions (repairs) in the case of pavement dis-



The asphalt pavement analyzer enables the contractor to estimate rutting susceptibility. Pictured here is lab technician Darrel Cooperrider at the quality control laboratory of The Shelly Company in Perry County. Photo by Michael D. Williams, Ohio Department of Natural Resources.

resses in excess of the specified limits. The contractor is required to carry a maintenance bond (essentially an insurance policy) that will cover the life of the warranty period. For portland cement concrete pavements, the bond must be for 40 percent of the bid price for the entire pavement. For asphalt pavements, the bond amount varies depending on the depth of the pavement to be constructed. For pavement thickness of 2.0 inches or less, the bond amount is 90 percent of the bid price of the entire pavement. For thickness of 2.1 inches to 4.0 inches, the bond amount is 60 percent of the bid price. For thickness over 4.1 inches, the bond required is 30 percent of the bid price. The bond amount for asphalt pavements is variable because the thicker the asphalt pavement, the less likely the occurrence of distress features and the more control the contractor has over the project.

BEYOND THE CONTRACTOR'S CONTROL

In some instances, a failure may not be due to anything that the contractor did or did not do. Such cases may include vehicle fires, oil spills, or lost tractor-trailer loads. In such cases, a contractor would not be required to repair the pavement at his expense. Other unforeseen circumstances may relieve the contractor of repair responsibilities as well.

In the case of increased traffic loads, such as those that result from the opening of a new shopping center or a new factory, a provision in the warranty relieves the contractor of financial responsibility.

If there is controversy or debate surrounding the findings of the DRT, a system is in place by which the contractor may appeal. The appeals process has time limits depending upon the particular problem. In a situation where the problem might jeopardize public safety, the repairs will take place immediately and determination of financial responsibility will follow.

WHAT DOES THE FUTURE HOLD?

At this time, there are more questions than answers. The answers to some of the concerns may not come to light for several years. The mineral aggregate producer is in the most precarious position of all raw material suppliers. On one hand, the aggregate producer supplies an extremely low priced commodity, which is the fundamental component of a relatively high priced end product. In the case of asphalt, a \$5 per ton aggregate makes up 95 percent of a \$25-\$30 per ton final product. In the case of portland cement concrete, that same \$5 per ton aggregate makes up almost 75 percent of a \$60 per cubic yard product. The aggregate producer, by supplying aggregate to a pavement warranty project, has compounded the financial liabilities. If the aggregate is blamed for the failure, what percentage of the cost of the remediation or repairs will be the responsibility of the aggregate producer? It is this scenario that is at the heart of the aggregate producer's apprehensions. Furthermore, the projects selected for warranty provisions will likely be fairly large, highly visible projects and thus fall under more intense scrutiny.

The law also requires that the Director of the Ohio Department of Transportation issue a progress report in December 2000. This report will include a comparison of cost, techniques, and quality between warranted and nonwarranted pavements. The report also will include recommendations for future use of warranties. The entire construction industry will be anxious to see this report.

MINIMIZING LIABILITIES—WHAT CAN THE MINERAL AGGREGATE PRODUCER DO?

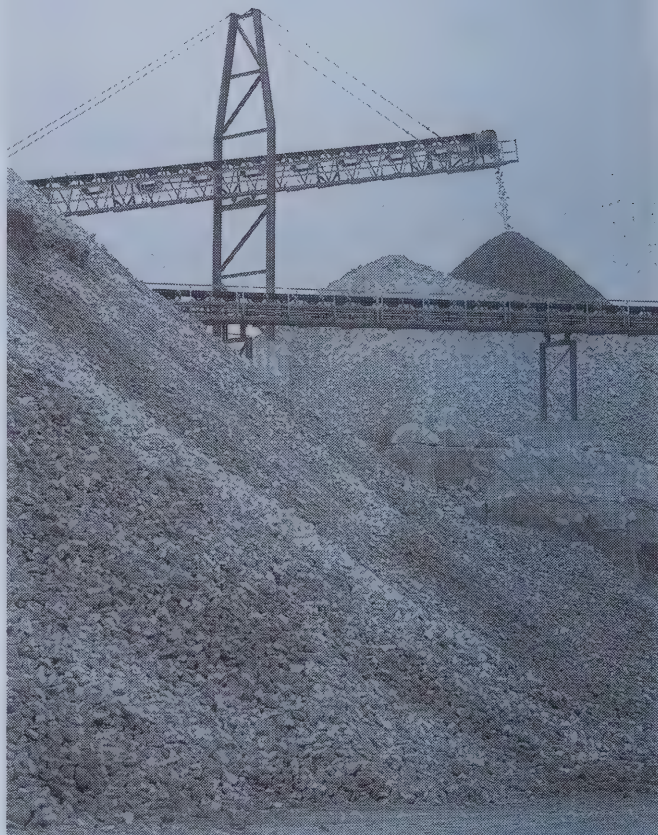
At this point in the warranty-implementation process, any liability-reducing methods are purely speculative. However, several actions may soften a producer's vulnerability in the case of a major pavement failure. Some of these include:

Training—Trained or certified technicians should perform the testing to determine the quality of the aggregate supplied to a warranty project. The Ohio Aggregates & Industrial Minerals Association, in conjunction with Ohio Department of Transportation, currently offers such training.

Documentation—The mineral aggregate producer and/or supplier should keep well-organized, detailed records at all times, but especially during warranty projects. Having proof that quality products were supplied may offer some level of protection.

Contractors—Highway pavement contractors should pay special attention to detail in construction practices and techniques. The "little things" mean a lot, especially when you are guaranteeing your work.

Communication—Throughout the process of writing the



Stockpiling and stockpile management are critical to aggregate quality. Ohio Level 1 Aggregate Technician Training teaches proper methods. Pictured here is the conveyor and stockpile at the Shelly Materials, Inc., Plant #10 in Union County. Photo by Michael D. Williams, Ohio Department of Natural Resources.

warranty language, industry, ODOT, and all involved parties exhibited a level of communication that was without precedent. Communication—at all levels—will continue to play the key role if warranties and warranty work are to succeed.

CONCLUSION

Warranties are here and they may be here to stay. Now more than ever, communication and cooperation are of utmost importance between the mineral aggregate producers/suppliers, highway-pavement contractors, and their largest customer—the Ohio Department Of Transportation. The aggregate and highway-pavement industries continue to make a concerted effort to ensure that the travelling public receives a high-quality, durable product. Improvements in construction practices have helped to minimize commuter inconveniences during construction activity. Warranties alone do not guarantee long-lasting, high-quality pavements; warranties simply insure that someone will fix pavements if they fail prematurely. Warranties, if viewed as an opportunity and not a nuisance, can serve as a mechanism for improving the public perception of the construction industry as a whole.

1999 OHIO MINING ACTIVITIES IN BRIEF

Reports were filed in 1999 for 205 coal-mining operations, including 3 mines with their own coal-washing facility. Coal production was reported from 116 of these 205 operations. Reports also were filed for 37 separate

coal-washing plants and associated facilities. Of 673 industrial-mineral-mining operations known to be operating in 1999, 491 operations were active. A total of 48 mines reported production of multiple mineral commodities. Of this total, 42 mines reported production of multiple industrial minerals, including 11 mines reporting production of multiple industrial minerals and coal; 6 mines reported production of coal and one industrial mineral. There were 437 new wells completed for oil and gas in 1999, of which 352 were productive and 85 were dry.

The total value¹ of coal was \$643,010,587 in 1999; the value of oil and gas was \$345,799,488; and the total value¹ of all nonfuel industrial minerals was \$786,113,597 in 1999.

¹Includes reported and estimated values. Some operations reporting sales did not report a value for those sales. A countywide- or statewide-average price per ton was calculated for each industrial mineral commodity based on sales for which the value was reported. A countywide average price per ton was calculated for coal based on sales for which the value was reported and method of production. These calculated averages were used to estimate the value of the sales for which the actual values were not reported.

TABLE 1.—1999 Mineral sales and production in Ohio

Commodity	Sales ¹	Production ²	Value ³	Change in value from 1998 (percent)
Coal	23,286,067 tons	22,539,911 tons	\$643,010,587	-16.0
Limestone and dolomite	79,494,912 tons	82,175,106 tons	\$361,314,456	+1.3
Sand and gravel	59,809,555 tons	59,922,549 tons	\$264,391,627	+4.0
Salt	4,572,685 tons	4,679,168 tons	\$92,675,122	+43.3
Sandstone and conglomerate	2,755,410 tons	2,850,836 tons	\$41,541,413	-18.1
Clay	3,097,626 tons	3,123,518 tons	\$12,893,867	+45.7
Shale	4,070,435 tons	4,070,435 tons	\$10,571,275	+19.1
Gypsum	294,757 tons	294,757 tons	\$2,652,813	+15.5
Peat	9,216 tons	9,275 tons	\$73,024	-33.3
Gas	⁴	103,540,658 MCF ⁵	\$249,118,322	+2.5
Oil	⁴	5,968,342 barrels	\$96,681,166	+26.0

¹Includes material for captive use.

²The production figures for the industrial minerals are estimates. Many operators do not know actual production. Some operators report estimates, other operators do not report any production. For those operators who do not report production, production is assumed to equal sales.

³The FOB value of industrial minerals sold was estimated for those mines which failed to report this information and for those producing material for captive use. These estimates were calculated using a countywide- or statewide-average price per ton calculated on reported FOB values.

⁴Figure not available.

⁵Thousand cubic feet.

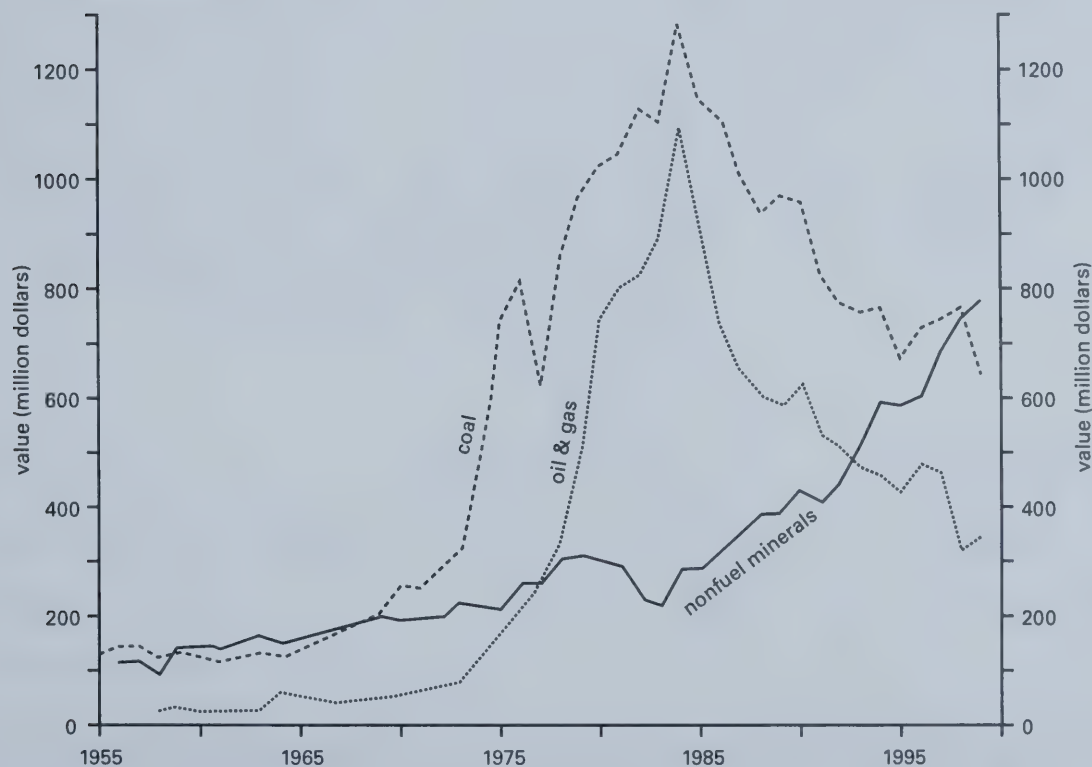


FIGURE 1.—Value of coal, nonfuel minerals, and oil and gas in Ohio.

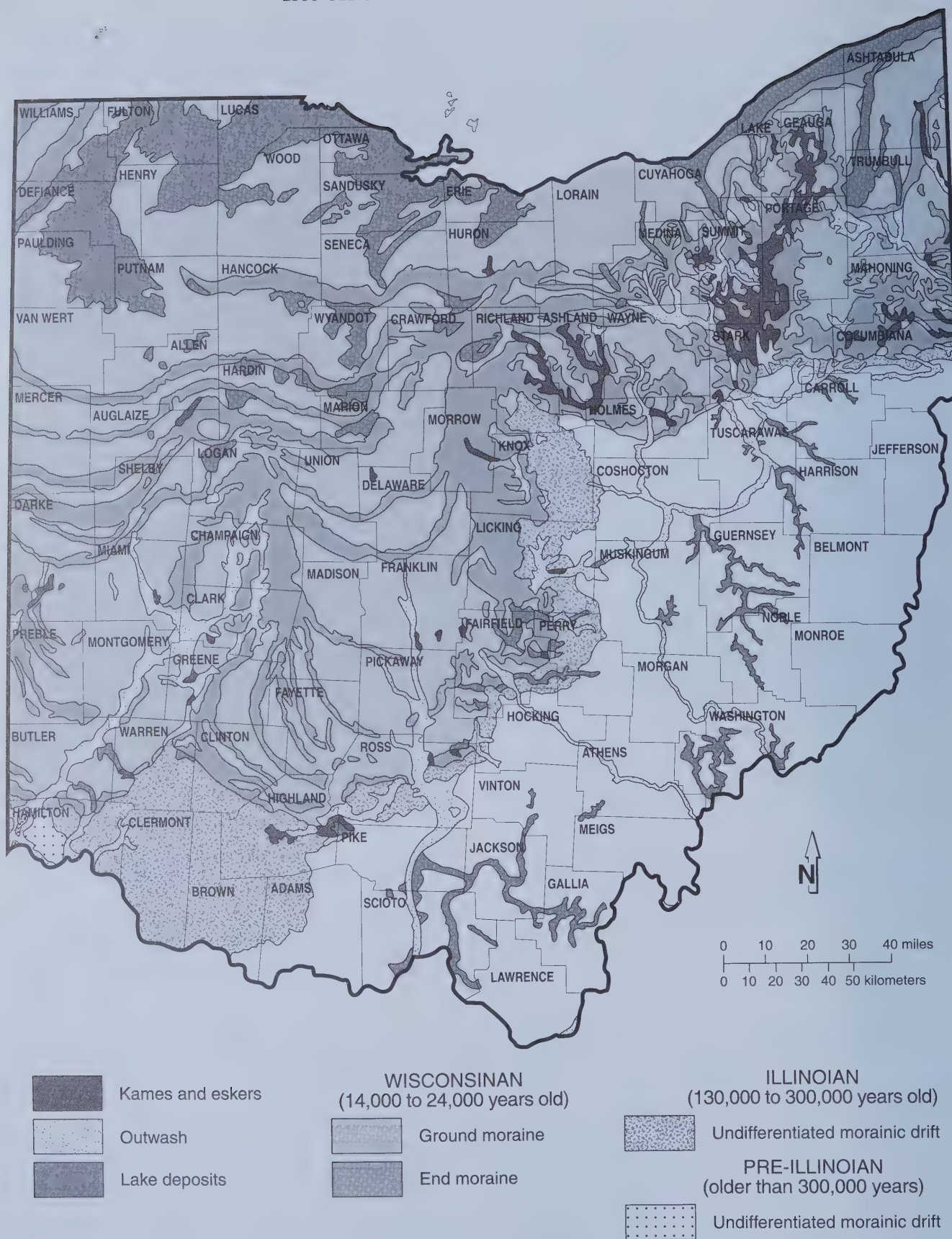


FIGURE 2.—Generalized map of the glacial deposits of Ohio. Continental glaciers advanced over the Ohio landscape several times during the Ice Age. These glaciers deposited unconsolidated materials on top of the bedrock over nearly two-thirds of the state. Most of Ohio's sand and gravel production comes from kames, eskers, and outwash, which were deposited by meltwater from the glaciers. Other glacially derived industrial minerals in Ohio include peat and clay.



FIGURE 3.—Generalized geologic map of Ohio. Mineral production occurs throughout Ohio and from every geologic system from the Cambrian to the Permian. Coal, limestone and dolomite, sandstone and conglomerate, shale, clay, gypsum, salt, and oil and gas are produced from Ohio bedrock.

COAL

Coal was produced by 48 companies at 116 mines in 22 Ohio counties during 1999. Production decreased 18.8 percent from 1998, totalling 22,539,911 tons in 1999; 10,966,410 tons (48.7 percent of total production) were produced at 108 surface mines, and 11,573,501 tons (51.3 percent of total production) were produced at 8 underground mines. In 1999, tonnage from underground production exceeded tonnage from surface production, continuing a trend that began in 1995. Of 26 coal-producing states, Ohio ranked 14th in 1999. The top five states, in descending order of production, are Wyoming (334.9 million tons), West Virginia (156.4 million tons), Kentucky (139.4 million tons), Pennsylvania (76.3 million tons), and Texas (53.0 million tons). These five states produced 69.5 percent of the nation's coal in 1999. Ohio produced 2.1 percent of the nation's coal in 1999. The top five coal-consuming states, in descending order of consumption, are Texas, Indiana, Ohio, Pennsylvania, and Illinois. These five states used 36.1 percent of the total coal consumed by all 50 states in 1999.²

In comparison to 1998, 10 fewer mines reported production of less than 50,000 tons, and 3 fewer mines produced between 50,000 and 500,000 tons. There was a net decrease of 13 mines in 1999.

The five leading counties for 1999 production were Belmont, Vinton, Harrison, Gallia, and Jackson Counties; these counties produced 65.7 percent of the 1999 total production. A total of 23,286,067 tons of coal were sold in 1999; total value³ was \$643,010,587. The average price per

²Information from U.S. Department of Energy, Energy Information Administration.
³Includes reported and estimated values. See footnote 1, p. 5.

ton of all coal sold was \$27.61; surface-mined coal averaged \$24.03 per ton and underground-mined coal averaged \$30.73.

In underground mining, 67.4 percent of the coal was produced by longwall mining and 32.6 percent was mined by continuous miner; no coal was produced by conventional mining in 1999. In surface operations, 94.3 percent of the coal was mined by conventional surface methods, and 5.7 percent was auger mined.

The Pittsburgh (No. 8) coal was the most heavily mined seam, followed by the Clarion (No. 4A), Meigs Creek (No. 9), Middle Kittanning (No. 6), and Lower Freeport (No. 6A) seams. Coal produced from these five seams constituted 82.5 percent of the total 1999 production.

A total of 13,093,412 tons of washed coal was reported in 1999. Reports from 11 coal-washing plants indicate an average 44.7 percent loss in washing.

Trucking was the primary means of coal disposition, carrying 44.3 percent of the total sales. Conveyor belts carried 27.6 percent, rail transported 20.5 percent, and water carried 7.6 percent of the coal sold in 1999. A total of 572,279 tons (2.5 percent) of the coal produced was reported as stored.

The total average annual employment reported in 1999 was 3,063 employees; 1,721 of these were production employees. Production employees worked an average of 172 days producing coal in 1999. The average annual wage earned by all production employees was \$46,109 based on those employees for whom wages were reported. The average annual wage for surface-mine production employees was \$36,898, and the average annual wage for underground-mine production employees was \$53,672. Wages earned by all employees totalled \$153,179,432 in 1999.

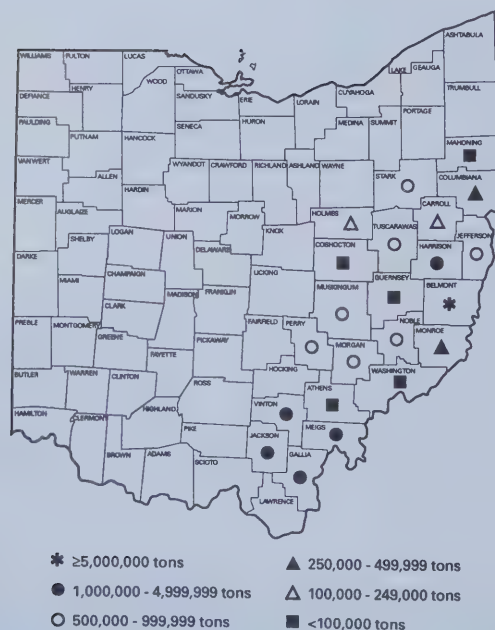


FIGURE 4.—Coal production in Ohio in 1999, by county.

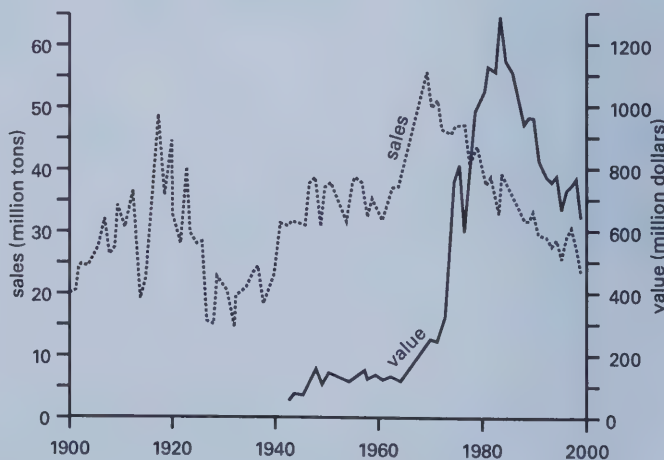


FIGURE 5.—Sales and value of coal in Ohio.

TABLE 2.—1999 Ohio coal production and sales by county, in descending order of production

County	Production (tons)	Sales (tons)
Belmont	5,495,529	5,366,703
Vinton	3,225,615	3,225,615
Harrison	3,075,032	3,411,310
Gallia	1,856,134	1,856,134
Jackson	1,163,193	1,163,193
Meigs	1,021,674	1,021,674
Perry	941,113	945,266
Morgan	940,255	868,818
Noble	768,910	757,434
Muskingum	664,202	664,202
Jefferson	642,026	642,026
Tuscarawas	638,386	637,876
Stark	574,974	574,974
Columbiana	492,294	497,378
Monroe	447,179	1,066,026
Holmes	175,163	175,163
Carroll	150,048	150,048
Coshocton	95,457	95,457
Washington	79,721	79,721
Guernsey	69,435	69,435
Mahoning	16,076	16,076
Athens	7,495	1,538
22 counties	22,539,911	23,286,067

TABLE 3.—1999 Ohio coal production by production-size group and change from 1998

Production-size group	1999		Change from 1998 (short tons)
	Number of mines reporting	Production (short tons)	
1,000,000 tons and over	5	11,444,433	-4,074,282
500,000 to 999,999 tons	6	3,734,175	+305,796
250,000 to 499,999 tons	5	1,607,823	-2,034,728
100,000 to 249,999 tons	22	3,672,369	+1,251,045
50,000 to 99,999 tons	16	1,134,437	-302,435
25,000 to 49,999 tons	16	552,806	-361,402
Under 25,000 tons	46	393,868	+5,587
TOTAL	116	22,539,911	-5,210,419

TABLE 4.—1999 Ohio coal production by county and mining method

County ¹	All methods (short tons)	Total number of mines	Underground				Surface			
			Number of underground mines reporting	Production (short tons)			Number of surface mines reporting	Production (short tons)		
				Total underground	Longwall	Continuous miner		Total surface	Strip	Auger
Athens	7,495	1					1	7,495	7,495	
Belmont	5,495,529	15	1	4,380,337	3,587,597	792,740	14	1,115,192	901,591	213,601
Carroll	150,048	5 ²					5 ²	150,048	139,866	10,182
Columbiana	492,294	8	1	313,950		313,950	7	178,344	128,233	50,111
Coshocton	95,457	3					3	95,457	95,457	
Gallia	1,856,134	2 ²	1 ³	1,632,683	1,387,743	244,940	2	223,451	223,451	
Guernsey	69,435	3					3	69,435	56,729	12,706
Harrison	3,075,032	12 ²	1	1,474,099		1,474,099	11 ²	1,600,933	1,540,871	60,062
Holmes	175,163	3					3	175,163	175,163	
Jackson	1,163,193	5					5	1,163,193	1,163,193	
Jefferson	642,026	9	2	467,010		467,010	7	175,016	164,741	10,275
Mahoning	16,076	3					3	16,076	16,076	
Meigs	1,021,674	2	2	1,021,674	861,753	159,921				
Monroe	447,179	1	1	447,179	447,179					
Morgan	940,255	1 ⁴					1 ⁴	940,255	903,765	36,490
Muskingum	664,202	2					2	664,202	607,014	57,188
Noble	768,910	6					6	768,910	762,746	6,164
Perry	941,113	5					5	941,113	871,993	69,120
Stark	574,974	8					8	574,974	571,610	3,364
Tuscarawas	638,386	16					16	638,386	539,687	98,699
Vinton	3,225,615	6 ²	1 ⁵	1,836,569	1,513,862	322,707	6 ²	1,389,046	1,389,046	
Washington	79,721	1					1	79,721	79,721	
TOTAL	22,539,911	116	8	11,573,501	7,798,134	3,775,367	108	10,966,410	10,338,448	627,962

¹Production from mines operating in more than one county was evenly split between the counties involved unless a by-county breakdown was provided by the operator.²Does not include mines extending into this county from adjoining counties.³This mine extends into Gallia County from Meigs County and is not included in the total number of mines.⁴This mine extends into Morgan County from Noble County and is not included in the total number of mines.⁵This mine extends into Vinton County from Meigs County and is not included in the total number of mines.

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TABLE 5.—1999 Ohio coal production by county and month

County ¹	Production (short tons)												
	Total annual	January	February	March	April	May	June	July	August	September	October	November	December
Athens	7,495												7,495
Belmont	5,495,529	428,848	424,656	491,683	432,013	436,650	521,117	481,273	437,078	458,173	491,262	431,339	461,437
Carroll	150,048	21,514	18,533	9,968	12,902	8,995	8,520	12,136	14,143	14,738	12,360	9,943	6,296
Columbiana	492,294	42,324	37,669	48,700	43,137	40,387	48,633	33,011	38,721	39,259	38,268	39,007	43,178
Coshocton	95,457	12,335	18,132	10,417	5,741	2,733	3,401	8,255	8,155	7,527	7,353	6,611	4,797
Gallia	1,856,134	139,416	213,044	247,283	183,616	155,347	162,610	153,553	121,727	113,479	119,305	112,226	134,528
Guernsey	69,435	10,087	8,495	7,965	7,422	7,572	5,186	8,012	7,158	2,046	2,052	1,385	2,055
Harrison	3,075,032	222,043	229,476	284,817	248,867	220,128	250,677	274,561	302,883	262,260	250,506	259,734	269,080
Holmes	175,163	12,535	13,008	12,686	13,189	14,043	14,063	20,045	17,671	16,403	13,660	13,660	14,200
Jackson	1,163,193	105,906	115,448	103,543	88,696	83,148	96,143	90,309	107,956	89,048	99,946	91,147	91,903
Jefferson	642,026	49,862	46,986	57,434	48,180	46,502	46,735	55,225	54,479	50,669	47,924	65,994	72,036
Mahoning	16,076		384	697		1,894			1,154	606	1,536	5,320	4,485
Meigs	1,021,674	77,521	102,435	136,114	105,815	85,190	82,149	82,010	68,019	69,129	74,550	68,837	69,905
Monroe	447,179	79,532	154,854	189,116	459	342			22,167		709		
Morgan	940,255	51,495	115,776	132,695	116,686	96,196	75,378	85,991	117,137	70,268	3,399	36,730	38,504
Muskingum	664,202	91,723	57,338	43,873	57,541	47,284	65,286	38,163	66,005	54,970	55,417	43,292	43,310
Noble	768,910	66,399	81,746	79,946	57,040	66,231	73,418	70,308	88,500	74,071	38,810	32,614	39,827
Perry	941,113	83,934	87,495	83,249	76,798	86,649	56,803	84,010	89,942	87,132	84,912	60,843	59,346
Stark	574,974	47,327	42,138	46,285	45,323	45,555	46,698	49,160	49,382	50,876	41,806	50,495	59,929
Tuscarawas	638,386	65,895	59,851	67,674	49,341	40,559	47,161	41,343	46,440	44,975	57,023	62,707	55,417
Vinton	3,225,615	279,510	211,018	356,881	332,197	293,284	195,954	204,341	244,109	280,638	303,328	301,996	222,359
Washington	79,721	9,587	8,074	5,726	8,907	7,562	6,560	11,483	6,080	5,001	8,333		2,408
TOTAL	22,539,911	1,897,793	2,046,556	2,416,752	1,933,870	1,786,251	1,806,492	1,803,189	1,908,906	1,791,268	1,752,459	1,693,880	1,702,495

¹Production from mines operating in more than one county was evenly split between the counties involved unless a by-county breakdown was provided by the operator.

TABLE 6.—1999 Ohio coal production

County ¹	Production								
	Total	Lower Mercer (No. 3)	Tionesta (No. 3B)	Brookville (No. 4)	Winters	Clarion (No. 4A)	Lower Kittanning (No. 5)	Middle Kittanning (No. 6)	Lower Freeport (No. 6A)
Athens	7,495								
Belmont	5,495,529								
Carroll	150,048							53,620	
Columbiana	492,294			2,424			20,392	1,600	
Coshocton	95,457						28,516	66,941	
Gallia	1,856,134					1,632,683		206,537	
Guernsey	69,435							41,618	
Harrison	3,075,032								1,474,099
Holmes	175,163						5,449	169,714	
Jackson	1,163,193	171,329			35	393,526	363,655	219,705	
Jefferson	642,026								
Mahoning	16,076			9,956			6,120		
Meigs	1,021,674					1,021,674			
Monroe	447,179								
Morgan	940,255								
Muskingum	664,202							332,101	332,101
Noble	768,910								
Perry	941,113								
Stark	574,974			161,784			292,417	648,696	
Tuscarawas	638,386	22,166	1,764	20,487			239,275	173,915	
							229,818	268,158	
Vinton	3,225,615	121,504		226,939	130,873	2,164,469	262,124	197,623	
Washington	79,721								
TOTAL	22,539,911	314,999	1,764	421,590	130,908	5,212,352	1,447,766	2,380,228	1,806,200

¹Production from mines operating in more than one county was evenly split between the counties involved unless a by-county breakdown was provided by the operator.



by county and seam

(short tons)									
Upper Freeport (No. 7)	Mahoning (No. 7A)	Harlem	Pittsburgh (No. 8)	Pomeroy-Redstone (No. 8A)	Meigs Creek (No. 9)	Uniontown (No. 10)	Waynesburg (No. 11)	Washington (No. 12)	County ¹
7,495									Athens
	21,433	74,995	4,417,852		877,877		146,223	53,477	Belmont
21,040	446,838								Carroll
									Columbiana
14,064				2,850					Coshocton
27,817			618,011	109,781	871,189	1,952			Gallia
									Guernsey
14,943									Harrison
									Holmes
138	467,010		114,572	60,306					Jackson
									Jefferson
			447,179						Mahoning
					940,255				Meigs
									Monroe
									Morgan
									Muskingum
					768,910				Noble
95,993									Perry
									Stark
122,083									Tuscarawas
					79,721				Vinton
									Washington
303,573	935,281	74,995	5,597,714	172,937	3,537,952	1,952	146,223	53,477	TOTAL

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TABLE 7.—1999 Disposition of Ohio coal, by county

County ¹	Number of mines	Disposition ¹ (short tons)						Stored
		Total ²	Rail	Water	Truck	Conveyor	Unspecified/ other	
Athens	1	1,538			1,538			5,957
Belmont	15	5,366,703	3,050,780	554,004	1,761,919			76,368
Carroll	5 ³	150,048			150,048			
Columbiana	8	497,378			497,378			2,227
Coshocton	3	95,457			95,457			
Gallia	2 ³	1,856,134		7,713	55,231	1,793,190		
Guernsey	3	69,435			69,435			
Harrison	12 ³	3,411,310	1,720,173	118,072	1,571,425		1,640	399,275
Holmes	3	175,163			175,163			
Jackson	5	1,163,193		16,696	799,078	347,419		
Jefferson	9	642,026			642,026			
Mahoning	3	16,076			16,076			
Meigs	2	1,021,674				1,021,674		
Monroe	1	1,066,026		1,066,026				
Morgan	1 ⁴	868,818				868,818		75,190
Muskingum	2	664,202			664,202			
Noble	6	757,434			610,094	147,340		12,752
Perry	5	945,266			945,266			
Stark	8	574,974			574,974			
Tuscarawas	16	637,876			637,876			510
Vinton	6 ³	3,225,615		19,668	960,122	2,245,825		
Washington	1	79,721			79,721			
TOTAL	116	23,286,067	4,770,953	1,782,179	10,307,029	6,424,266	1,640	572,279

¹Tonnage of coal shipped from mines operating in more than one county was evenly split between the counties involved and type(s) of disposition reported unless a by-county breakdown was provided by the operator.

²Does not reflect tonnage stored. Reflects tonnage sold and shipped from mine.

³Does not include mines extending into this county from adjoining counties.

⁴This mine extends into Morgan County from Noble County and is not included in the total number of mines.

TABLE 8.—1999 Rail shipments of Ohio coal, by county of origin and carrier

County	Number of mines	Shipments (short tons)			
		Total	Norfolk Southern	Wheeling & Lake Erie	Ohio Central
Belmont	1	3,050,780	3,050,780		
Harrison	1	1,720,173		449,428	1,270,745
TOTAL	2	4,770,953	3,050,780	449,428	1,270,745

TABLE 9.—1999 Washed Ohio coal

		Raw coal (short tons)	Washed coal ¹ (short tons)	Loss in washing (short tons)	Loss in washing (percent)	Percent of all washed coals
By type of mining	From surface mines	3,367,621	2,877,420 ²	490,201	14.6	22.0
	From underground mines	20,300,599	10,215,992	10,084,607	49.7	78.0
	TOTAL	23,668,220	13,093,412	10,574,808	44.7	100.0
By seam	Upper Mercer (No. 3A)	27,682	24,175	3,507	12.7	0.2
	Brookville (No. 4)	205,533	170,593	34,940	17.0	1.3
	Winters	174,410	130,308	44,102	25.3	1.0
	Clarion (No. 4A)	11,367,420	4,490,926	6,876,494	60.5	34.3
	Lower Kittanning (No. 5)	621,437	542,261	79,176	12.7	4.1
	Middle Kittanning (No. 6)	611,349	533,454	77,895	12.7	4.1
	Lower Freeport (No. 6A)	1,811,820	1,488,057	323,763	17.9	11.4
	Upper Freeport (No. 7)	50,907	44,457	6,450	12.7	0.3
	Mahoning (No. 7A)	172,231	130,724	41,507	24.1	1.0
	Pittsburgh (No. 8)	8,130,344	5,106,536	3,023,808	37.2	39.0
	Meigs Creek (No. 9)	495,087	431,921	63,166	12.8	3.3
	TOTAL	23,668,220	13,093,412	10,574,808	44.7	100.0

¹Total washed coal figures for 1999 reflect figures as reported by Ohio's coal preparation plants. These figures do not necessarily represent only 1999 production. In 1999, 22,539,911 tons of coal were produced, of which 12,380,739 tons (54.9%) were reported as washed by Ohio's mine operators. Coal not designated as washed or unwashed by Ohio's mine operators was assumed to be unwashed.

²The raw tonnage (before washing) and/or the clean tonnage (after washing) of coal was estimated for those mines which failed to report this information. These estimates were calculated using a statewide-average loss-in-washing percentage based on raw/washed coal values for type of mining and for seam deemed to be reliable.

TABLE 10.—1999 Dollar value of coal at mine by county and mining method

County ¹	Total				Underground				Surface			
	No. of mines	Tonnage sold (short tons)	Value at mine ² (dollars)	Per ton average (dollars)	No. of mines	Tonnage sold (short tons)	Value at mine ² (dollars)	Per ton average (dollars)	No. of mines	Tonnage sold (short tons)	Value at mine ² (dollars)	Per ton average (dollars)
Athens	1	1,538	\$32,291	\$20.00					1	1,538	\$32,291	\$20.00
Belmont	15	5,366,703	108,428,112	20.20	1	4,251,512	\$85,030,240	\$20.00	14	1,115,191	23,397,872	20.98
Carroll	5 ³	150,048	3,543,210	23.61					5 ³	150,048	3,543,210	23.61
Columbiana	8	497,378	9,337,751	18.77	1	313,950	6,279,000	20.00	7	183,428	3,058,751	16.68
Coshocton	3	95,457	1,850,750	19.39					3	95,457	1,850,750	19.39
Gallia	2 ⁴	1,856,134	85,213,878	45.91	1 ⁴	1,632,683	79,756,565	48.85	2	223,451	5,457,313	24.42
Guernsey	3	69,435	1,294,901	18.65					3	69,435	1,294,901	18.65
Harrison	12 ³	3,411,310	73,359,056	21.50	1	1,862,355	40,506,243	21.75	11 ³	1,548,955	32,852,813	21.21
Holmes	3	175,163	3,503,260	20.00					3	175,163	3,503,260	20.00
Jackson	5	1,163,193	24,813,658	21.33					5	1,163,193	24,813,658	21.33
Jefferson	9	642,026	14,650,113	22.82	2	467,010	11,017,583	23.59	7	175,016	3,632,530	20.76
Mahoning	3	16,076	211,056	13.13					3	16,076	211,056	13.13
Meigs	2	1,021,674	49,908,775	48.85	2	1,021,674	49,908,775	48.85				
Monroe	1	1,066,026	20,420,469	19.16	1	1,066,026	20,420,469	19.16				
Morgan	1 ⁵	868,818	54,509,641	62.74					1 ⁵	868,818	54,509,641	62.74
Muskingum	2	664,202	13,284,040	20.00					2	664,202	13,284,040	20.00
Noble	6	757,434	18,395,522	24.29					6	757,434	18,395,522	24.29
Perry	5	945,266	19,265,731	20.38					5	945,266	19,265,731	20.38
Stark	8	574,974	9,108,215	15.84					8	574,974	9,108,215	15.84
Tuscarawas	16	637,876	11,377,940	17.84					16	637,876	11,377,940	17.84
Vinton	6 ³	3,225,615	119,306,403	36.99	1 ⁶	1,836,569	89,716,396	48.85	6	1,389,046	29,590,007	21.30
Washington	1	79,721	1,195,815	15.00					1	79,721	1,195,815	15.00
TOTAL	116	23,286,067	\$643,010,587	\$27.61	8	12,451,779	\$382,635,271	\$30.73	108	10,834,288	\$260,375,316	\$24.03

¹Sales reported from mines operating in more than one county were evenly split between the counties involved unless a by-county breakdown was provided by the operator.

²The FOB value of coal sold was estimated for those mines which failed to report this information. These estimates were calculated using a countywide-average price per ton by mining method based on reported FOB values deemed to be reliable.

³Does not include mines extending into this county from adjoining counties.

⁴One mine extends into Gallia County from Meigs County and is not included in the total number of mines.

⁵This mine extends into Morgan County from Noble County and is not included in the total number of mines.

⁶This mine extends into Vinton County from Meigs County and is not included in the total number of mines.

TABLE 11.—1999 Ohio coal-mine employment¹, by occupational group and month

Occupational group	Number of employees												
	Total annual	January	February	March	April	May	June	July	August	September	October	November	December
All production workers	1,721	1,796	1,810	1,807	1,776	1,676	1,718	1,700	1,713	1,696	1,661	1,633	1,648
Underground mines	945	1,002	1,002	1,004	1,010	905	933	929	916	903	910	918	911
Surface mines	776	794	808	803	766	771	785	771	797	793	751	715	737
Supervisory, technical, and clerical	589	631	621	617	606	591	585	581	577	578	564	558	562
Central preparation plant, central shop, etc.	470	509	509	509	508	475	475	472	475	467	416	407	412
Reclamation	58	54	56	56	53	61	68	61	59	61	47	54	55
Other ²	225	226	221	222	223	229	227	231	223	224	224	227	227
TOTAL	3,063	3,216	3,217	3,211	3,166	3,032	3,073	3,045	3,047	3,026	2,912	2,879	2,904

¹Employment was estimated for mines not reporting employment.²Other² includes all employees who are not categorized in any other employment category, such as mobile equipment operators, mechanics, or general outside workers.TABLE 12.—1999 Ohio coal-mine production employment¹, by county and month

County ²	Number of employees												
	Monthly average	January	February	March	April	May	June	July	August	September	October	November	December
Athens	2	0	0	0	0	0	0	0	0	0	0	0	22
Belmont	313	310	308	310	320	286	314	320	312	315	317	318	321
Carroll	13	16	16	17	14	13	13	12	10	10	10	10	14
Columbiana	38	40	40	40	38	35	34	34	34	37	40	40	40
Coshocton	8	11	15	8	8	7	7	7	7	7	7	7	7
Gallia	179	186	183	184	185	184	181	175	177	175	175	174	167
Guernsey	9	8	8	8	8	10	10	13	12	9	6	5	9
Harrison	226	204	220	217	212	220	240	234	237	231	225	236	233
Holmes	13	12	12	10	10	12	17	16	16	12	12	10	16
Jackson	78	75	82	83	78	76	74	77	79	80	79	77	77
Jefferson	97	98	98	98	99	96	95	91	93	95	97	99	100
Mahoning	2	1	1	1	2	2	2	1	2	2	1	7	7
Meigs	103	103	103	103	103	103	103	103	103	103	102	102	101
Monroe	35	92	92	95	90	7	7	7	7	5	10	10	0
Morgan	44	50	50	49	50	49	48	48	48	49	32	29	28
Muskingum	52	56	55	55	54	53	50	47	52	50	50	51	52
Noble	48	53	53	54	53	55	54	51	52	50	45	32	26
Perry	63	63	64	65	64	74	71	72	69	64	61	44	45
Scioto	0	0	0	0	0	0	0	0	0	0	0	0	0
Stark	48	46	46	46	43	48	48	48	55	51	46	46	49
Tuscarawas	44	46	44	45	45	48	45	43	44	46	44	41	41
Vinton	300	319	313	312	294	294	301	294	297	298	294	293	291
Washington	6	7	7	7	6	4	4	7	7	7	8	2	2
TOTAL	1,721	1,796	1,810	1,807	1,776	1,676	1,718	1,700	1,713	1,696	1,661	1,633	1,648

¹Employment was estimated for mines not reporting employment.²For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.

TABLE 13.—1999 Ohio coal-mine employment¹ in central preparation plants, central shops, etc., by county and month

County ²	Number of employees												
	Monthly average	January	February	March	April	May	June	July	August	September	October	November	December
Belmont	37	41	36	36	39	34	38	39	38	37	37	36	36
Columbiana	11	12	12	12	12	12	12	10	11	11	11	11	11
Coshocton	28	27	28	28	30	27	27	27	28	27	27	26	28
Gallia	3	6	6	6	4	4	3	1	2	2	2	2	2
Guernsey	1	1	1	1	1	1	1	1	1	1	1	1	1
Harrison	43	43	43	43	42	43	42	42	44	44	44	44	44
Jackson	13	14	14	14	14	14	13	13	12	11	11	11	11
Jefferson	6	6	6	6	6	6	6	6	6	6	6	6	6
Mahoning	2	2	2	2	2	2	2	2	2	2	2	2	2
Meigs	117	116	118	118	118	118	118	116	116	116	115	115	124
Monroe	20	37	37	37	37	16	14	14	11	9	9	9	8
Morgan	73	84	85	86	86	86	86	86	86	86	37	32	33
Perry	14	17	17	17	16	14	14	14	13	12	12	10	10
Scioto	28	28	28	28	28	28	28	28	28	27	27	27	27
Tuscarawas	24	26	26	26	25	23	22	22	24	24	24	24	24
Vinton	50	49	50	49	48	47	49	51	53	52	51	51	51
TOTAL	470	509	509	509	508	475	475	472	475	467	416	407	412

¹Employment was estimated for mines not reporting employment.²For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.TABLE 14.—1999 Ohio coal-mine employment¹ in supervisory, technical, and clerical positions, by county and month

County ²	Number of employees												
	Monthly average	January	February	March	April	May	June	July	August	September	October	November	December
Belmont	147	155	151	148	148	147	147	146	146	145	144	144	146
Carroll	7	6	7	7	7	6	7	6	6	5	6	5	10
Columbiana	13	13	13	13	13	13	13	13	12	12	12	12	12
Coshocton	15	15	16	16	15	15	15	15	15	15	15	14	14
Gallia	89	89	88	88	88	89	88	88	88	89	89	90	89
Guernsey	1	1	1	1	1	1	1	1	1	1	1	1	1
Harrison	28	28	28	27	28	27	27	26	27	27	29	29	29
Jackson	16	16	18	18	16	16	16	16	16	16	16	16	16
Jefferson	7	7	7	7	7	7	7	7	7	8	8	8	8
Mahoning	2	2	2	1	1	2	2	2	2	2	2	2	2
Meigs	51	50	51	50	50	51	51	51	51	51	52	52	52
Monroe	26	50	46	44	39	21	21	20	17	16	14	14	14
Morgan	36	39	39	39	39	39	39	39	39	39	27	27	26
Muskingum	5	6	6	6	6	6	6	6	5	4	4	4	5
Noble	10	11	11	11	11	11	11	11	11	11	9	9	8
Perry	11	11	11	11	11	11	11	11	12	12	12	7	7
Scioto	10	10	10	10	10	10	10	10	10	10	10	10	10
Stark	5	5	4	5	5	6	5	6	6	6	5	6	5
Tuscarawas	6	8	5	5	5	8	5	5	5	8	8	5	5
Vinton	103	108	106	109	105	104	102	101	100	100	100	102	102
Washington	1	1	1	1	1	1	1	1	1	1	1	1	1
TOTAL	589	631	621	617	606	591	585	581	577	578	564	558	562

¹Employment was estimated for mines not reporting employment.²For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.

TABLE 15.—1999 Ohio surface coal-mine reclamation employment¹, by county and month

County ²	Number of employees												
	Monthly average	January	February	March	April	May	June	July	August	September	October	November	December
Belmont	3	4	5	1	1	1	3	2	2	4	3	2	3
Carroll	3	5	5	5	5	5	3	2	0	0	0	0	0
Columbiana	6	3	3	3	6	9	10	7	7	4	5	6	6
Coshocton	0	0	0	3	0	0	0	0	0	0	0	0	0
Guernsey	0	0	0	0	0	0	1	1	1	1	1	0	0
Harrison	6	3	4	7	2	3	6	4	4	8	14	9	9
Jackson	2	2	2	2	2	2	2	2	2	2	1	1	1
Jefferson	2	0	0	0	0	3	4	4	3	2	2	0	0
Morgan	29	31	31	29	31	31	31	31	31	31	14	27	27
Muskingum	1	0	0	0	0	0	0	0	1	2	2	2	2
Noble	5	5	5	5	5	5	5	5	5	5	3	5	5
Stark	1	0	0	0	0	1	1	1	1	0	0	0	0
Vinton	2	1	1	1	1	1	2	2	2	2	2	2	2
TOTAL	58	54	56	56	53	61	68	61	59	61	47	54	55

¹Employment was estimated for mines not reporting employment.²For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.TABLE 16.—1999 Ohio coal-mine employment¹ in other positions², by county and month

County ³	Number of employees												
	Monthly average	January	February	March	April	May	June	July	August	September	October	November	December
Belmont	90	88	83	84	88	93	91	93	86	89	89	97	96
Columbiana	3	3	3	3	3	3	3	3	3	3	3	3	3
Gallia	29	29	29	29	29	29	29	29	29	29	29	29	29
Guernsey	0	0	0	0	0	0	0	1	1	1	0	0	1
Harrison	24	23	23	23	23	24	26	26	26	24	24	24	24
Jackson	17	17	17	17	17	17	17	17	18	18	18	18	18
Jefferson	5	5	5	5	5	5	5	5	5	5	5	5	5
Mahoning	0	0	0	0	0	0	0	0	0	0	0	2	2
Meigs	14	14	14	13	13	13	13	14	14	14	14	14	14
Morgan	6	6	6	7	7	7	7	7	7	7	7	1	1
Muskingum	1	2	2	2	2	2	2	2	0	0	0	0	0
Noble	1	1	1	1	1	1	1	1	1	1	1	0	0
Scioto	6	6	6	6	6	6	6	6	6	6	6	6	6
Stark	3	3	3	3	3	3	3	3	3	3	3	3	3
Tuscarawas	6	6	6	6	6	6	6	6	6	6	7	7	7
Vinton	20	23	23	23	20	20	18	18	18	18	18	18	18
TOTAL	225	226	221	222	223	229	227	231	223	224	224	227	227

¹Employment was estimated for mines not reporting employment.²"Other positions" includes all employees who do not belong in any other employment category, such as mobile equipment operators, mechanics, or general outside workers.³For those operations reporting activity in more than one county, employment was evenly split (to the nearest whole employee) between the counties involved unless a by-county breakdown was provided by the operator.

TABLE 17.—1999 Wage and salary payments to Ohio coal-mine employees, by county and occupational group

County ¹	Wage and salary payments (nearest whole dollar) ²						
	All occupations	Underground production employees	Surface production employees	Central preparation plant, central shop, etc.	Supervisory, technical, and clerical	Reclamation	Other
Athens	\$74,777		\$74,777				
Belmont	29,357,172	\$11,432,892	3,050,406	\$1,732,893	\$8,644,262	\$45,260	\$4,451,459
Carroll	1,285,609		1,082,891		152,087	50,631	
Columbiana	2,863,104	1,200,000	534,317	393,742	425,071	218,294	91,680
Coshocton	2,343,085		312,732	1,138,300	887,053	5,000	
Gallia	19,322,313	9,896,353	737,211	129,075	6,652,443		1,907,231
Guernsey	433,226		306,319	30,016	55,891	6,000	35,000
Harrison	16,136,934	6,778,731	4,253,890	1,869,735	1,860,593	138,587	1,235,398
Holmes	372,786		372,786				
Jackson	4,535,555		2,920,555	385,000	500,000	55,000	675,000
Jefferson	2,958,557	1,660,605	578,072	223,875	326,451	3,655	165,899
Mahoning	157,748		68,404	56,734	27,610		5,000
Meigs	17,804,896	6,230,832		6,763,839	3,808,486		1,001,739
Monroe	5,173,349	2,118,003		1,348,850	1,706,496		
Morgan	10,018,068		1,595,696	3,851,748	2,756,134	1,520,249	294,241
Muskingum	2,165,000		1,900,000		235,000	30,000	
Noble	2,854,651		1,930,615		616,315	257,820	49,901
Perry	3,068,804		2,308,144	417,752	342,908		
Scioto	1,986,811			881,016	519,000		586,795
Stark	2,022,396		1,632,450		251,342	2,520	136,084
Tuscarawas	2,194,502		1,175,148	733,174	142,876		143,304
Vinton	25,794,977	11,402,971	3,578,684	2,124,278	7,420,351	55,000	1,213,693
Washington	255,112		220,000		35,112		
TOTAL	\$153,179,432	\$50,720,387	\$28,633,097	\$22,080,027	\$37,365,481	\$2,388,016	\$11,992,424

¹For those operations reporting activity in more than one county, wage and salary payments were evenly split between the counties involved unless a by-county breakdown was provided by the operator.

²For those operations reporting only a total wage and salary payment to all workers, an equal pay rate was assumed for all employees. In cases where quarterly employment was reported but wage and salary payments were not, wage and salary payments for that quarter were estimated from reported payments in the other quarters to arrive at the annual figure. For mines reporting employment and no wage and salary payments, wage and salary payments were estimated using a countywide or statewide average.



View of conveyor and stacker system at the Ostrander Plant #10 in Union County operated by Shelly Materials, Inc. The quarry and processing facility employed an average of 45 people in 1999. Photo by Michael D. Williams

INDUSTRIAL MINERALS

Industrial minerals, other than mineral fuels, were produced in a total of 87 Ohio counties in 1999. The combined value of all nonfuel industrial minerals sold in 1999 was \$786,113,597.

In 1999, 418 companies operated 673 industrial-mineral mining operations. Industrial minerals were produced or sold by 326 companies from 491 active operations. Thirty-six of the 326 companies produced more than one industrial mineral from 42 operations. Fourteen companies produced coal and one or more industrial minerals from 17 operations. Twenty-seven companies produced multiple industrial-mineral commodities (no coal) from 31 operations. The remaining 290 companies produced one industrial-mineral commodity.

Of the 42 multiple industrial-mineral operations (including those operations producing coal and more than one industrial-mineral commodity), 9 operations produced sand and gravel and clay; 6 operations produced limestone, clay, and shale; 6 operations produced clay and shale; 5 operations produced limestone and clay; 3 operations produced limestone and sand and gravel; 3 operations produced

sandstone and sand and gravel; 2 operations produced sand and gravel, clay, and peat; 2 operations produced sandstone and clay; 1 operation produced limestone and sandstone; 1 operation produced limestone and shale; 1 operation produced sand and gravel and shale; 1 operation produced sand and gravel, sandstone, and clay; 1 operation produced limestone, sandstone, clay, and shale; and 1 operation produced sand and gravel, limestone, and clay.

The 315 multiple industrial-mineral-commodity production employees worked an average of 208 days in 1999. Total wages of \$13,218,842 were paid to a total of 481 employees (315 production employees and 166 nonproduction employees). The average annual wage, based on those employees for whom wages were reported, was \$27,482.

The total average annual employment reported in 1999 for industrial mineral operations was 5,360 people (3,724 production employees and 1,636 nonproduction employees). Total wages for all employees at industrial mineral operations in 1999 were \$204,169,057. The average annual wage, based on those employees for whom wages were reported, was \$38,091.

TABLE 18.—1999 Value of Ohio industrial minerals

Commodity	Sales (tons)	Change from 1998 (tons/percent)	Value ¹ (dollars)	Percent of total value
Limestone and dolomite	79,494,912	-48,919/-0.1	\$361,314,456	46.0
Sand and gravel	59,809,555	+362,853/+0.6	\$264,391,627	33.6
Salt	4,572,685	+672,536/+17.2	\$92,675,122	11.8
Sandstone and conglomerate	2,755,410	-2,907,502/-51.3	\$41,541,413	5.3
Clay	3,097,626	+944,640/+43.9	\$12,893,867	1.6
Shale	4,070,435	+106,563/+2.7	\$10,571,275	1.3
Gypsum	294,757	+39,496/+15.5	\$2,652,813	0.3
Peat	9,216	-1,012/-9.9	\$73,024	<0.1
TOTAL	154,104,596	-831,345/-0.5	\$786,113,597	100.0

¹The FOB value of industrial minerals sold was estimated for those mines which failed to report this information and for those producing material for captive use. These estimates were calculated using a countywide- or statewide-average price per ton based on reported FOB values.



Aggregate technician Marty Vann prepares a sample for weighing at The Shelly Company Quality Control Laboratory in Perry County. The 6,000-square-foot building provides offices and laboratory space for aggregate testing, soil testing, hot asphalt design and testing, asphalt binder testing, environmental (stack and water) testing, and safety. Photo by Michael D. Williams.

County ¹	Number of employees ³																				
	Total employees ²	Total ²		Limestone and dolomite		Sand and gravel		Sandstone and conglomerate		Clay		Shale		Salt		Gypsum		Peat		Multiple commodities	
		Production	Non-production	Production	Non-production	Production	Non-production	Production	Non-production	Production	Non-production	Production	Non-production	Production	Non-production	Production	Non-production	Production	Non-production	Production	Non-production
Adams	53	46	7	46	7																
Allen	43	34	9	31	9	3															
Ashland	41	34	7			34	7													2	2
Ashtabula	27	19	8			17	6													6	2
Athens	43	25	18	12	7	7	9			1	0										
Auglaize	38	28	10	19	6	7	3			1	0									2	1
Belmont	36	28	8	16	3	3	2													10	3
Brown	15	13	2	13	2																
Butler	117	85	32			85	32														
Carroll	7	4	3			4	3														
Champaign	31	24	7			19	6													5	1
Clark	56	44	12			40	12													4	0
Clermont	18	11	7			11	7														
Clinton	56	30	26	30	26					1	0	2	0							11	1
Columbiana	45	30	15			16	14														
Coshocton	74	40	34			31	30	9	5											1	0
Crawford	38	38	0	38	0															1	
Cuyahoga	262	175	87																		
Darke	7	4	3			4	3			2	0										
Defiance	2	2	0																		
Delaware	76	68	8	68	8																
Erie	184	135	49	121	48	1 ^s	5	9	0											4	0
Fairfield	16	10	6			7														3	1
Fayette	13	9	4	9	4																
Franklin	335	267	68	155	36	102	31													10	1
Fulton	10	9	1			9	1														
Gallia	27	16	11			5	8													11	3
Geauga	97	35	62			18	2	14	58											3	2
Greene	120	81	39	27	17	47	21													7	1
Guernsey	9	5	4	5	4																
Hamilton	209	107	102	0	1	87	98													20	3
Hancock	35	32	3	32	3																
Hardin	14	11	3	11	3																
Harrison	5	5	0	3	0																
Highland	98	55	43	55	43																
Hocking	22	11	11			10	11			1	0										
Holmes	35	21	14			14	11			0	1									6	2
Huron	1	1	0																		
Jackson	19	15	4	7	1			1	0		2									7	1
Jefferson	4	3	1	3	1																
Knox	72	48	24	24		19	23	29	1												
Lake	213	117	96			5 ^s	12 ^s	2	2											110	82
Lawrence	7	1	6			1	6													1	0
Licking	39	30	9			25	8													3	1
Logan	63	37	26	28	20	9	6													2	1

LIMESTONE AND DOLOMITE

Limestone and dolomite were sold or produced by 72 companies at 124 operations in 50 Ohio counties during 1999. Sales of limestone and dolomite totalled 79,494,912 tons (-0.1 percent from 1998); Erie, Delaware, Ottawa, Wyandot, and Franklin Counties accounted for 40.1 percent of those sales. Reported known production totalled 82,175,106 tons.

Lime produced from Ohio limestone and dolomite totalled 1,244,605 tons in 1999 and came from six operations in Ottawa, Sandusky, Seneca, and Wyandot Counties. Ohio ranks 4th nationally in the production of lime out of 34 producing states. The top five states, in descending order of lime production, are Missouri, Kentucky, Alabama, Ohio, and Texas. Ohio ranks 7th in the production of crushed stone (which includes crushed sandstone) out of 49 produc-

ing states. The states leading Ohio in the production of crushed stone, in descending order, are, Texas, Pennsylvania, Florida, Georgia, Illinois, and Missouri.⁴

The total value⁵ of limestone and dolomite sold in 1999 was \$361,314,456. Average price per ton was \$4.55.

An annual average of 1,682 employees worked an average of 219 days to produce limestone and dolomite. Total wages of \$86,356,737 were paid to a total of 2,241 employees (1,682 production employees and 559 nonproduction employees). The average annual wage, based on those employees for whom wages were reported, was \$38,535. An additional 104 people (82 production employees and 22 nonproduction employees) were employed by operations mining limestone and dolomite along with one or more other mineral commodities.

Primary uses for crushed and broken limestone and dolomite were road construction/resurfacing and commercial building. Other major uses for various forms of limestone and dolomite included stone for asphaltic concrete and portland cement concrete, aglime, and the production of lime.

⁴Information from U.S. Geological Survey.

⁵Includes reported and estimated values. See footnote 1, p. 5.

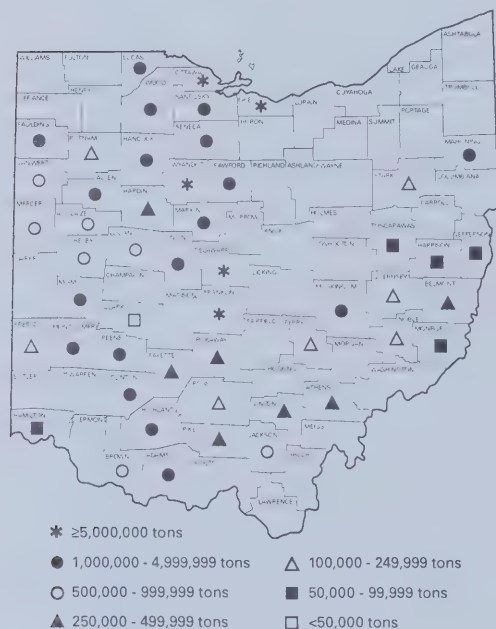


FIGURE 6.—Sales of limestone and dolomite in Ohio in 1999, by county.

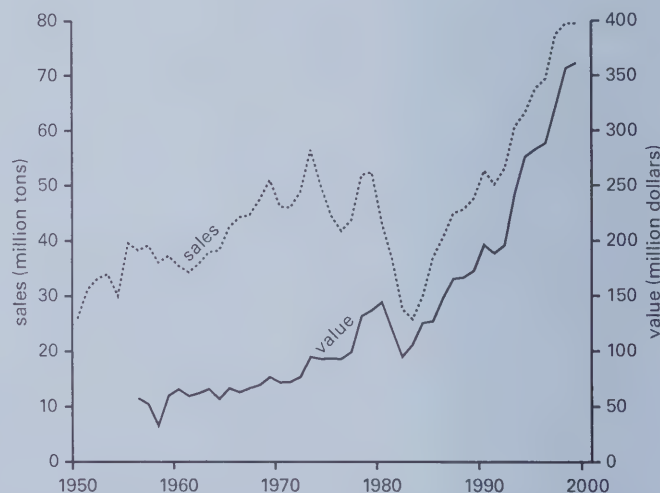


FIGURE 7.—Sales and value of limestone and dolomite in Ohio. Value line dashed where data not available.

TABLE 20.—1999 Production of lime from Ohio stone, by county and type

County	Total tons ¹	Building (tons)	Chemical and industrial (tons)	Refractory (tons)	Other (tons)
Ottawa	121,206	97,699	23,507		
Sandusky	972,115		229,447	742,668	
Seneca	38,787		38,787		
Wyandot	112,497		112,497		
TOTAL	1,244,605	97,699	404,238	742,668	0

¹Burning produced a 57.2 percent weight loss.

TABLE 21.—1999 Ohio limestone and dolomite sales, by county and type

County	Tons sold											Raw stone for burning	Un-specified/ other			
	Total all types	Crushed and broken stone							Dimension stone	Stone for portland cement manufac- ture	Agricultural stone (aglime)					
		Total	Riprap	Flux stone	Stone for portland cement concrete	Stone for asphaltic concrete	Road construc- tion/ resurfacing	Commercial building						Railroad ballast	Extenders/ fillers	Unspecified/ other
Adams	1,977,300	1,977,300														
Allen	2,150,140	2,142,628	2,902													
Athens	381,804	381,804														
Auglaize	866,304	858,435	22,430													
Belmont	471,927	471,927	9,014													
Brown	701,607	701,607														
Clark	16,429	16,429	1,063													
Clinton	2,050,632	2,030,901	97,838													
Crawford	1,860,807	1,764,400	18,610	25,307												
Delaware	6,349,385	6,342,371	55,019													
Erie	8,344,166	8,255,148	62,386													
Fayette	281,454	281,454														
Franklin	5,313,183	5,313,183	34,000													
Greene	1,366,156	634,879	9,046													
Guernsey	136,841	136,841														
Hamilton	58,004	58,004	661													
Hancock	1,237,800	1,232,896	11,460													
Hardin	310,022	302,685	1,580													
Harrison	53,920	53,920	3,235													
Highland	2,328,528	2,307,773	14,074													
Jackson	639,428	595,578														
Jefferson	53,922	53,922	3,236													
Logan	938,631	938,631	25,526													
Lucas	3,315,149	3,305,149	319,115	168,430												
Mahoning	2,132,189	1,331,396														
Marion	1,035,736	1,022,357	7,432													
Mercer	603,082	588,082	10,000													
Miami	1,267,383	1,185,665	6,024	12,186												
Monroe	78,933	78,933														
Montgomery	1,157,750	886,430	1,938													
Muskingum	2,083,465	1,977,397	106,068													
Noble	1,72,089	172,089	18,628													
Ottawa	6,247,454	5,972,740	97,149													
Paulding	2,111,003	1,224,003	27,000													
Perry	170,416	170,416														
Pickaway	288,339	288,339	2,039													
Pike	379,550	372,664	15,202													
Preble	150,089	142,037	21,006													
Putnam	243,650	243,650	213													
Ross	188,040	188,040	512													
Sandusky	4,247,444	1,650,332														
Seneca	2,773,546	2,684,484	2,209													
Shelby	941,884	941,884	24,634													
Stark	190,659	190,659	16,858													
Tuscarawas	91,302	91,302	35,637													
Union	2,375,833	2,375,833														
Van Wert	612,206	612,206	15,000													
Vinton	492,516	492,516														
Wood	2,668,276	2,608,276	29,831													
Wyandot	5,588,539	5,135,242	18,151	247,063												
TOTAL	79,494,912	72,784,897	1,146,726	452,986	6,283,084	7,378,969	23,027,678	19,165,230	635,757	840,686	13,853,781	15,045	2,613,390	1,174,484	208,266	2,907,096

SAND AND GRAVEL

Sand and gravel were sold or produced by 223 companies at 305 operations in 60 Ohio counties plus Lake Erie during 1999. Sales⁶ of sand and gravel totalled 59,809,555 tons (+0.6 percent from 1998). Sand accounted for 31,119,196 tons of the total sand and gravel sold, and gravel accounted for 28,690,359 tons. Hamilton, Butler, Franklin, Portage, and Stark Counties led in sales, accounting for 45.5 percent of the total. Reported known production⁶ of sand and gravel totalled 59,922,549 tons in 1999. Ohio ranks 4th nationally in the production of construction sand and gravel out of 50 producing states and Puerto Rico. The top five states, in descending order of production, are California, Texas, Michigan, Ohio, and Arizona. Ohio ranks 9th nationally in the production of industrial sand and gravel out of 36 states. The states leading Ohio in the production of industrial sand and gravel, in descending order, are Illinois, Michigan,

New Jersey, Texas, Wisconsin, California, North Carolina, and Oklahoma. Ohio ranks 3rd nationally in the production of aggregates, including crushed stone. The top five states, in descending order of aggregate production, are California, Texas, Ohio, Pennsylvania, and Illinois.⁷

A total of 97,627 tons of sand were dredged from Lake Erie in 1999. The Maumee Bay and Maumee River areas are no longer producing sand or gravel.

The total value⁸ of sand and gravel sold in 1999 was \$264,391,627. Average price per ton was \$4.42.

An annual average of 1,245 employees worked an average of 187 days in 1999 to produce sand and gravel. Total wages of \$72,742,054 were paid to a total of 1,867 employees (1,245 production employees and 622 nonproduction employees). The average annual wage, based on those employees for whom wages were reported, was \$38,962. An additional 106 people (78 production employees and 28 nonproduction employees) were employed by operations mining sand and gravel along with one or more other mineral commodities.

Road construction/resurfacing, building, asphaltic concrete, and portland cement concrete were the major uses for Ohio sand and gravel in 1999.

⁶Please note—Sales and production figures for sand include material dredged from Lake Erie.

⁷Information from U.S. Geological Survey.

⁸Includes reported and estimated values. See footnote 1, p. 5.

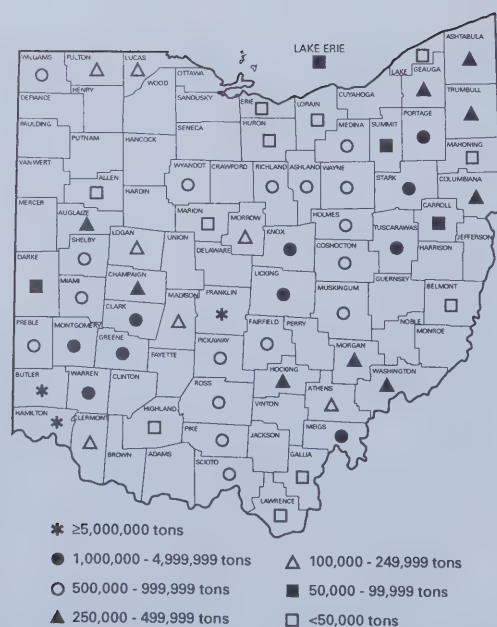


FIGURE 8.—Sales of sand and gravel in Ohio in 1999, by county.

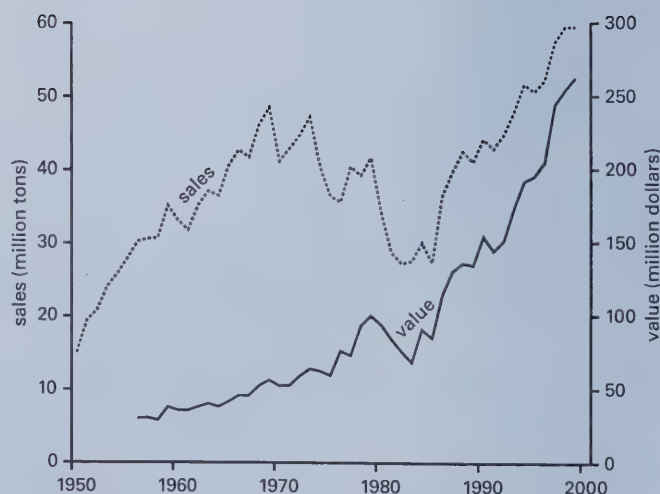


FIGURE 9.—Sales and value of sand and gravel in Ohio. Value line dashed where data not available. Figures from 1984 to 1999 include Lake Erie dredged material.



Core technician Jeff Grow of The Shelly Company samples recently installed asphalt near the I-270 and Sawmill Road interchange in northern Franklin County. The 2-inch core will be sent to an Ohio Department of Transportation laboratory and tested to determine if the asphalt pavement meets specifications. Photo by Michael D. Williams.

TABLE 22.—1999 Ohio sand and gravel sales, by county and type

County	Tons sold																
	Total sand and gravel	Total sand	Total gravel	Building		Portland cement concrete		Asphaltic concrete		Road construction/ resurfacing		Filtration		Foundry sand	Industrial sand	Other/unspecified	
				Sand	Gravel	Sand	Gravel	Sand	Gravel	Sand	Gravel	Sand	Gravel			Sand	Gravel
Allen	36,158	20,810	15,348	95,975	167,349					83,677	127,086	20,787	15,073			23	275
Ashland	520,580	193,597	326,983	129,634	108,210					2,474	65,249	8,114				13,945	32,548
Ashtabula	384,453	167,257	217,196	15,787	44,903			10,438	6,959	5,000	8,000					27,035	43,737
Athens	160,729	99,971	60,758	249,951		60,000										8,746	896
Auglaize	336,606	297,636	38,970			47,685	35,450										3,520
Belmont	5,256	5,256						5,256									
Butler	6,263,470	2,921,396	3,342,074	477,541	855,887	875,252	1,156,701	740,665	749,479	379,821	445,346		11,166	244,417	203,700	123,495	
Carroll	39,379	39,744	52,635						51,635	39,744	1,000						
Champaign	447,967	136,254	311,713	47,266	79,697	34,105	42,212									54,883	189,804
Clark	2,236,570	833,942	1,402,628	40,776	46,004	182,743	346,175	236,580	414,867	28,833	185,230	4,324	5,732	1,131	339,555	404,620	
Clermont	193,950	147,378	46,572													147,378	46,572
Columbiana	340,800	140,174	200,626	26,312	56,690					50,001	20,000	4,943	17,244		58,918	106,692	
Coshocton	717,402	310,186	407,216	43,153	30,514	55,765	63,786	77,883	85,638	110,858	214,069	3,088	3,617		19,439	9,592	
Darke	70,545	35,272	35,273	35,272	35,273										3,318		
Erie	3,318	3,318															
Fairfield	989,131	730,078	259,053	109,375	39,322	217,817	76,530	254,120	89,285	94,387	33,163	14,521	5,102		39,858	15,651	
Franklin	5,316,877	2,262,060	3,054,817	432,044	1,693,395	1,118,797	265,000	694,671	621,448	44	52,007	8,504			8,000	422,967	
Fulton	246,061	246,061		246,061													
Gallia	32,030	32,030															
Geauga	377,549	283,755	93,794	89,232	29,286	109,587		40,359			2,699	4,190	37,528		32,030	24,281	
Greene	3,088,758	921,772	2,166,986	38,217	2,898	316,149	759,903	282,456	362,919	93	539,412			64,978	219,879	501,854	
Hamilton	6,359,886	3,691,238	2,668,648	967,856	1,457,657	1,048,144	396,631	497,671	126,520	231,618	379,592	2,665	5,977	76,326	866,958	302,271	
Highland	4,887		4,887													4,887	
Hocking	257,383	171,384	85,999			40,000	8,000	55,117	56,275	288	4,476				75,979	17,248	
Holmes	647,506	364,760	282,746	7,447	103,153	186,057	85,032	37,280	11,687	104,479	60,083	15,663	15,079		13,834	7,712	
Huron	6,406	6,406		6,406													
Knox	1,064,661	498,938	565,723	86,270	113,453	220,000	118,000	94,000	115,000		46,072				98,668	173,198	
Lake	5,000	5,000													5,000		
Lake Erie	97,627	97,627		40,970		11,691	40,469					4,497		16,811			
Lawrence	16,811	16,811															
Licking	1,473,043	627,896	845,147	380,346	627,669	102,686	10,000	124,680	62,304		54,472		17,046		20,184	73,656	
Logan	152,938	85,320	67,618	1,547	4,026	7,876		5,687				1,701			68,509	63,592	
Lorain	6,750	6,750		6,750													
Lucas	135,712	135,712		116,531											19,181	6,668	
Madison	175,133	48,465	126,668		120,000	10,116				36,349					2,000		
Mahoning	7,800	7,800													7,800		
Marion	41,541	38,935	2,606	14,376	796	4,580						164	36		19,815	1,774	
Medina	926,046	657,886	268,160	139,385	110,173	473,461		6,993			145,586	2,956	12,401		35,091		
Meigs	1,863,572	1,265,612	597,960	164,169	65,279	296,076	139,658	539,615	264,479	180,625	92,347	42,838	21,771	567	42,289	14,426	
Miami	565,932	297,749	268,183	16,281	17,372	66,611	80,385	112,861	105,781	13,897	27,447	2,138	2,316		85,394	34,882	

Montgomery	1,430,495	491,179	939,316	24,942	42,907	240,090	310,980	51,070	115,931	49,577	12,992	49,978	10,835	175,077	445,671
Morgan	392,660	252,623	140,037	49,578	26,048	53,913	27,748	49,577	21,247	33,747	33,747	4,217	27,147	175,077	4,100
Morrow	176,471	39,898	136,573	35,681	90,551	111,864	99,201	177,449	129,695	48,998	32,752	7,458	6,554	141,014	6,716
Muskingum	972,937	566,719	406,218	79,936	53,247	135,000	33,105	33,105	110,000	9,905	50,387		6,613	5,723	70,618
Pickaway	517,792	198,791	319,001	15,058	151,641	59,617									6,973
Pike	743,792	565,441	178,351	4,032		674,771	169,685	516,759	193,892	22,733	36,725		21,861	479,059	119,765
Portage	4,644,417	3,278,993	1,365,424	1,171,471	636,087					24,139	12,378		33,216	857,754	320,166
Preble	505,104	202,716	302,388	27,437	106,445					25,279	106,443			150,000	89,500
Richland	569,011	228,518	340,493	32,209	234,139					880	18,889		1,519	123,407	53,667
Ross	657,558	367,585	289,973	86,077	45,827	67,560	38,628	131,034	106,221	20,472	41,055	3,148	36,421	59,294	21,821
Scioto	766,932	631,946	134,986	26,952	30,854	10,000				406,364	70,844			188,630	33,288
Shelby	619,930	351,106	268,824	7,167	4,778	180,000	120,000	110,213	90,320	53,726	53,726			793,290	483,953
Stark	4,631,640	2,480,822	2,150,818	18,689	203,184	470,653	131,947	421,942	576,347	776,248	755,387			6,449	148
Summit	85,382	65,593	19,789	29,649				29,495	19,634		7			26,456	
Trumbull	325,800	302,013	23,787	122,946	23,787	137,353		15,258							
Tuscarawas	2,359,192	1,218,380	1,140,812	450,517	455,014	111,592	51,952	203,537	192,121	398,288	379,101		39,033	32,923	23,591
Warren	2,460,815	756,089	1,704,726	72,355	132,469	105,275	422,417	174,484	302,675		119,761			400,795	727,404
Washington	324,044	149,589	174,455	4,810				20,544	34,178		2,885			124,235	137,392
Wayne	720,520	386,852	333,668	104,392	293,460	112,508	10,485	67,212	22,830	92,740	29,625			10,000	6,893
Williams	731,713	514,217	217,496	117,756	86,466	258,211	29,625	69,125	29,625	69,125			15,732		42,155
Wyandot	504,127	217,890	286,237	113,421	83,491	97,534	187,024					6,935			
TOTAL	59,809,555	31,119,196	28,690,359	6,620,005	8,509,401	8,311,139	5,183,155	5,999,627	5,101,271	3,360,662	4,306,884	212,829	369,009	6,151,902	5,220,639

TABLE 23.—1999 Ohio Lake Erie sand and gravel production

Area	Production ¹	
	Cubic yards	Short tons
Lake Erie		
Fairport	66,616	89,932
Vermilion-Lorain "A"	5,700	7,695
Vermilion-Lorain "B"	0	0
TOTAL	72,316	97,627

¹Production reported in cubic yards; converted to tons in the ratio of 1 cubic yard equals 1.35 short tons.

SANDSTONE AND CONGLOMERATE

Sandstone and conglomerate were sold or produced by 20 companies at 28 operations in 18 Ohio counties during 1999. Sales totalled 2,755,410 tons (-51.3 percent from 1998); the large decrease in sales from 1999 is attributed to less activity at the American Electric Power Gavin coal-fired power plant in Gallia County. Geauga, Gallia, Perry, Knox, and Pike Counties accounted for 91.4 percent of the total sales. Crushed sandstone and conglomerate accounted for 2,709,979 tons of the total sales, and dimension stone accounted for 45,431 tons. Reported known production of sandstone and conglomerate was 2,850,836 tons in 1999. Ohio ranks 12th nationally in production of all dimension stone out of 33 producing states. Ohio ranks 3rd in the production of sandstone dimension stone. The top five states, in descending order of total dimension-stone pro-

duction, are Indiana, Vermont, Georgia, Wisconsin, and Massachusetts.⁹ National standings for crushed stone are included with Limestone and Dolomite.

The total value¹⁰ of sandstone and conglomerate sold in 1999 was \$41,541,413. Average price per ton was \$14.05 for crushed stone and \$76.59 for dimension stone.

An annual average of 137 employees worked an average of 161 days in 1999 to produce sandstone and conglomerate. Total wages of \$8,951,790 were paid to a total of 223 employees (137 production employees and 86 nonproduction employees). The average annual wage, based on those employees for whom wages were reported, was \$39,963. An additional 60 people (50 production employees and 10 nonproduction employees) were employed by operations mining sandstone and conglomerate along with one or more other mineral commodities.

Crushed stone was used primarily for glass sand, construction, foundry sand, silica flour, and aggregate. Dimension stone was used primarily for rough construction purposes.

⁹Information from U.S. Geological Survey.

¹⁰Includes reported and estimated values. See footnote 1, p. 5.

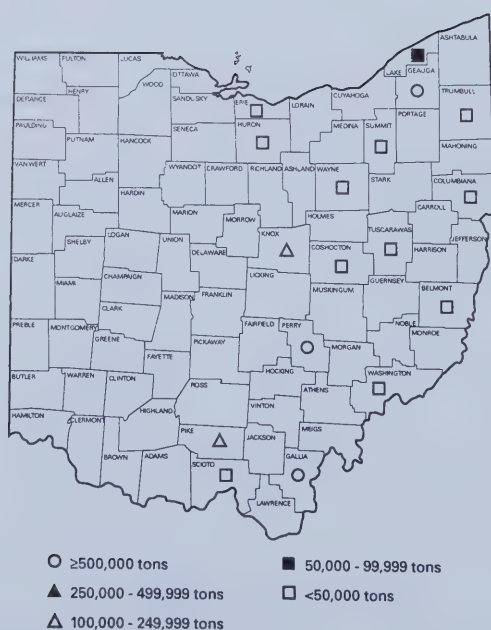


FIGURE 10.—Sales of sandstone and conglomerate in Ohio in 1999, by county.

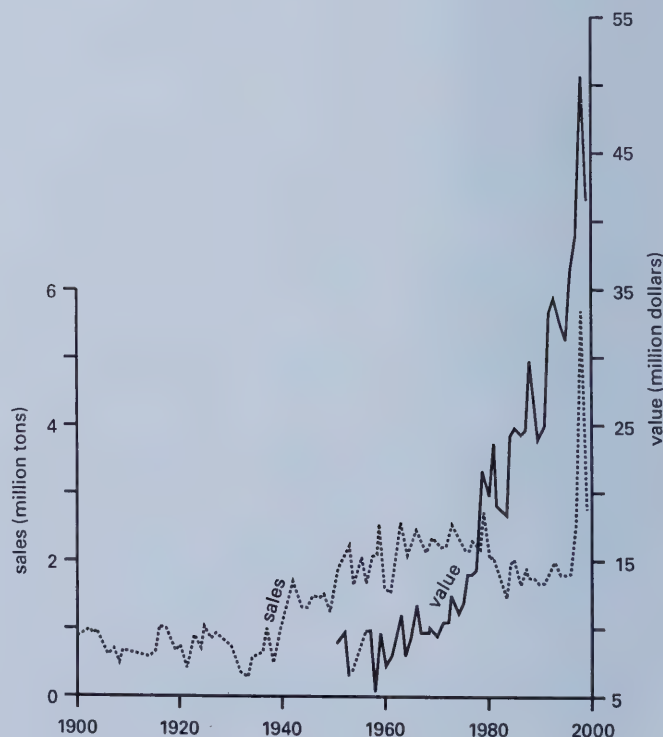


FIGURE 11.—Sales and value of sandstone and conglomerate. Value line dashed where data not available.

TABLE 24.—1999 Ohio sales of crushed sandstone and conglomerate, by county and type

County	Tons sold														
	Total	Foundry sand	Glass sand	Metallurgical pebble	Refractory	Riprap	Aggregate	Silica flour	Polishing/ grinding sand	Fire and furnace sand	Engine sand	Frac sand	Construc- tion	Industrial sand	Other/ unspecified
Belmont	5,525					5,525									18,386
Columbiana	18,386														694,367
Gallia	694,367														340,014
Geauga	935,102	87,507	223,058	17,324	13,134	9,107	72,000		37,830		5,807	5,940	93,374	39,114	
Huron	9,107														
Knox	175,810		129,354					43,875					1,342		1,239
Lake	97,698						54,641						43,057		
Perry	553,791		55,874		7,810			84,224						33,514	372,369
Pike	160,191	63,195	3,197	4,474	5,262				251		4,628		16,150	10,938	52,096
Summit	1,632					1,632									
Trumbull	2,625														
Tuscarawas	27,245	15,667											2,625		
Washington	1,100					1,100							11,578		
Wayne	27,400												27,400		
TOTAL	2,709,979	166,369	411,483	21,798	26,206	17,364	126,641	128,099	38,081		10,435	5,940	195,526	83,566	1,478,471

TABLE 25.—1999 Ohio sales of dimension sandstone and conglomerate, by county and type

County	Tons sold									Other/ unspecified
	Total	Refractory	Rough construction	Rubble	Grindstones	Rough architectural	Finished	Curbing	Flagging	
Coshocton	25,484		25,484							
Erie	5,860		444	898	11		4,507			47
Scioto	14,040		14,040							
Trumbull	47									
TOTAL	45,431		39,968	898	11		4,507			47

CLAY

Clay was sold or produced by 48 companies at 57 operations in 28 Ohio counties during 1999. Clay sales (including material for captive use) totalled 3,097,626 tons (+43.9 percent from 1998); Tuscarawas, Wayne, Hamilton, Perry, and Ottawa Counties accounted for 61.0 percent of the total sales. National rankings for clay are included with Shale.

¹¹Includes reported and estimated values. See footnote 1, p. 5.

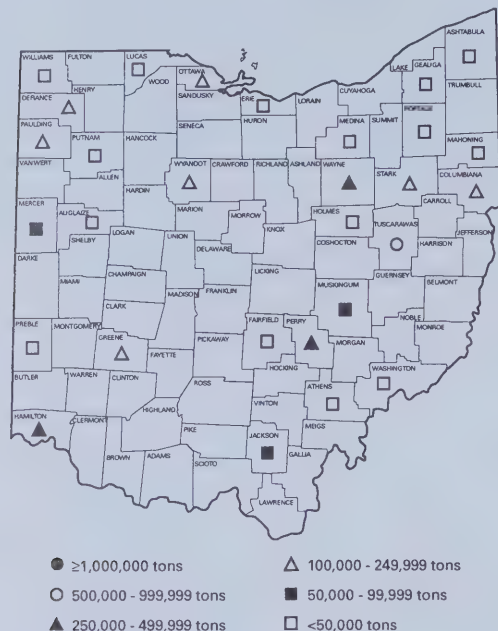


FIGURE 12.—Clay sales in Ohio in 1999, by county.

Reported known production of clay was 3,123,518 tons. The total value¹¹ of clay sold (including material for captive use) in 1999 was \$12,893,867. Average price per ton was \$4.16.

An annual average of 24 employees worked an average of 141 days in 1999 mining clay. Total wages of \$750,468 were paid to a total of 40 employees (24 production employees and 16 nonproduction employees). The average annual wage, based on those employees for whom wages were reported, was \$18,762. An additional 136 people (100 production employees and 36 nonproduction employees) were employed by operations mining clay along with one or more other mineral commodities.

Clay mined in Ohio in 1999 was used largely for captive use in the landfill industry, the production of common clay products, and for cement manufacture.

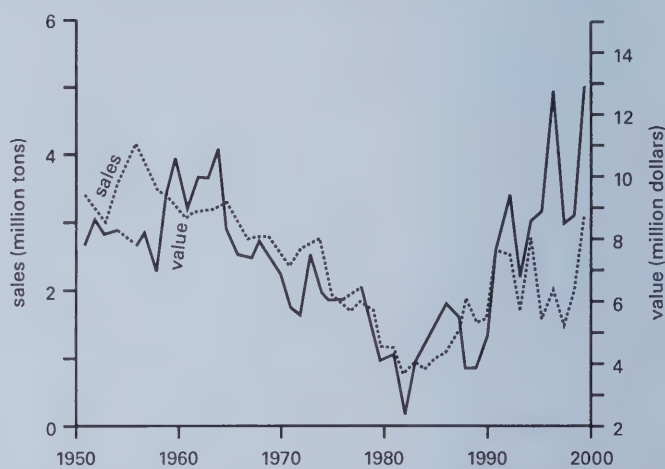


FIGURE 13.—Sales and value of clay in Ohio. Value line dashed where data not available.

TABLE 26.—1999 Ohio clay sales, by county and type

County	Tons sold								
	Total	Common clay products	Stoneware	Vitrified products	Cement manufacture	Refractories	Construction	Landfill use	Other/ unspecified
Ashtabula	4,353						4,353		
Athens	574								574
Auglaize	8,613	8,613							
Columbiana	174,274	99,298		2,490		13,958	1,000	57,528	
Defiance	135,000							135,000	
Fairfield	4,683						3,018		1,665
Geauga	1,384	1,384							
Greene	159,756	13,340			146,416				
Hamilton	365,819							365,819	
Holmes	3,543	3,543							
Jackson	52,161								52,161
Lucas	9,003	9,003							
Mahoning	16,775				9,656	2,999	4,120		
Medina	23,738	23,738							
Mercer	68,500							68,500	
Muskingum	66,049	5,499	8,800					51,750	
Ottawa	227,102							227,102	
Paulding	173,758				173,758				
Perry	327,483	36,630	1,700					289,153	
Portage	16,808						16,760	5	43
Preble	2,308								
Putnam	3,900						2,308		
Stark	101,110	59,275		1,335				3,900	
Tuscarawas	549,869	291,477		39,254		15,998		40,500	
Washington	9,582						9,582	203,140	
Wayne	420,659						10,190	410,469	
Williams	153							153	
Wyandot	170,669							170,669	
TOTAL	3,097,626	551,800	10,500	43,079	329,830	32,955	51,331	2,023,688	54,443

SHALE

Shale was sold or produced by 19 companies at 26 operations in 15 Ohio counties during 1999. Shale sales (including material for captive use) totalled 4,070,435 tons (+2.7 percent from 1998); Hamilton, Stark, Tuscarawas, Cuyahoga, and Marion Counties accounted for 93.2 percent of the total sales. Ohio ranks 5th nationally in the production of clay and shale out of 44 producing states. The top five states, in descending order of production, are Alabama, North Carolina, Texas, Georgia, and Ohio.¹² Reported pro-

duction equalled sales. The total value¹³ of shale sold (including material for captive use) in 1999 was \$10,571,275. Average price per ton was \$2.60.

An annual average of 25 employees worked an average of 193 days in 1999 mining shale. Total wages of \$1,555,956 were paid to a total of 55 employees (25 production employees and 30 nonproduction employees). The average annual wage, based on those employees for whom wages were reported, was \$28,290. An additional 56 people (38 production employees and 18 nonproduction employees) were employed by operations mining shale along with one or more other mineral commodities.

Shale mined in Ohio was largely for captive use in the landfill industry and in the production of common clay products and for lightweight aggregate.

¹²Information from U.S. Geological Survey.

¹³Includes reported and estimated values. See footnote 1, p. 5.

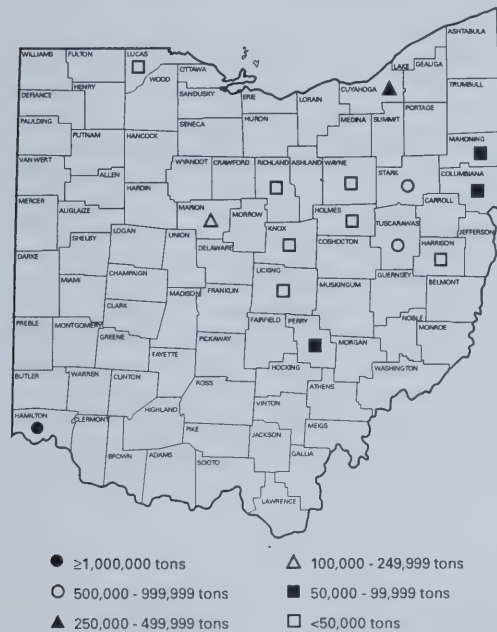


FIGURE 14.—Shale sales in Ohio in 1999, by county.

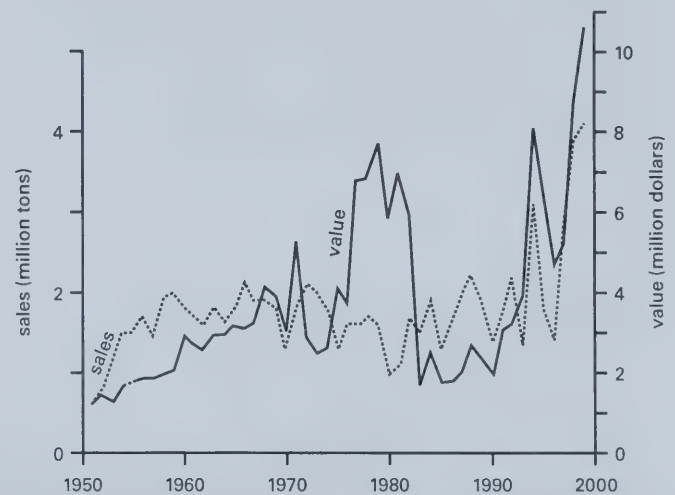


FIGURE 15.—Sales and value of shale in Ohio. Value line dashed where data not available.

TABLE 27.—1999 Ohio shale sales, by county and type

County	Tons sold							
	Total	Common clay products	Vitrified products	Cement manufacture	Lightweight aggregate	Construction	Landfill use	Other/ unspecified
Columbiana	60,261	35,761						24,500
Cuyahoga	322,624				322,624			
Hamilton	2,043,038						2,043,038	
Harrison	36,000	36,000						
Holmes	2,400	2,400						
Knox	4,188					4,188		
Licking	14,199	14,199						
Lucas	8,600			8,600				
Mahoning	67,131			67,131				
Marion	208,947	208,947						
Perry	66,748	66,748						
Richland	14,701	14,701						
Stark	665,173						665,173	
Tuscarawas	552,616	331,031	5,820			215,765		
Wayne	3,809					3,809		
TOTAL	4,070,435	709,787	5,820	75,731	322,624	223,762	2,708,211	24,500

SALT

Salt was produced by 3 companies at 5 operations in 5 Ohio counties during 1999. Total tonnage of salt sold in 1999 amounted to 4,572,685 tons (+17.2 percent from 1998). Rock salt sales totalled 3,729,224 tons from 2 underground mines, one each in Cuyahoga and Lake Counties. Three brining operations, one each in Licking, Summit, and Wayne Counties, sold a total of 11,400 tons of salt in brine and 832,061 tons of evaporated salt. Reported known production of salt was 4,679,168 tons in 1999. The top five salt-producing states nationally, in alphabetical order, are Kansas, Louisiana, New York, Ohio, and Texas.¹⁴

The total value¹⁵ of the salt sold in 1999 was \$92,675,122. Average price per ton of rock salt was \$19.98 and of salt in brine and evaporated salt was \$21.54. The average price per ton of all salt sold was \$20.27.

An annual average of 299 employees worked an average of 309 days in 1999 to produce salt. Total wages of \$20,251,631 were paid to a total of 452 employees (299 production employees and 153 nonproduction employees). The average annual wage, based on those employees for whom wages were reported, was \$44,805. The primary use for Ohio salt was ice control. Salt also was used as an additive in animal feed, for cattle blocks, and as a commercial and residential water-softening agent.

¹⁴Information from U.S. Geological Survey.

¹⁵Includes reported and estimated values. See footnote 1, p. 5.

¹⁶Includes estimated values only. See footnote 1, p. 5.

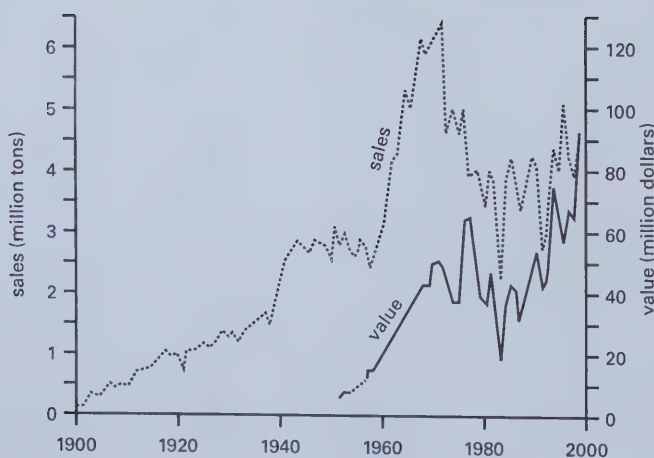


FIGURE 16.—Sales and value of salt in Ohio. Value line dashed where data not available.

GYPSUM

Gypsum was produced by 1 company at 1 operation in Ottawa County during 1999. Gypsum production and sales (all material was for captive use) totalled 294,757 tons (+15.5 percent from 1998). The reported value¹⁶ of the gypsum sold was \$2,652,813. Average price per ton was \$9.00. Ohio ranks 15th nationally in the production of gypsum out of 19 producing states. The top five states, in descending order of production, are Oklahoma, Iowa, Texas, Michigan, and California.¹⁴

An annual average of 4 employees worked 321 days in 1999 producing gypsum. Total wages of \$341,579 were paid to a total of 7 employees (4 production employees and 3 nonproduction employees). The average annual wage in 1999 was \$48,797. The sole use of gypsum from this operation is for the manufacture of wallboard.

PEAT

Peat was produced by 4 companies at 4 operations in 3 Ohio counties during 1999. Peat sales (including material for captive use) totalled 9,216 tons (-9.9 percent from 1998). Champaign, Portage, and Williams Counties accounted for 100 percent of the total sales. The total value of the peat sold in 1999 was \$73,024. Average price per ton was \$7.92. Reported known production was 9,275 tons. Ohio ranks 14th nationally in the production of peat out of 19 producing states. The top three states, in descending order of production, are Florida, Michigan, and Minnesota.¹⁴

Most peat operations in Ohio are owner operated. Therefore, employment information is not available.

Peat produced in Ohio was used primarily for mulch and soil mix.

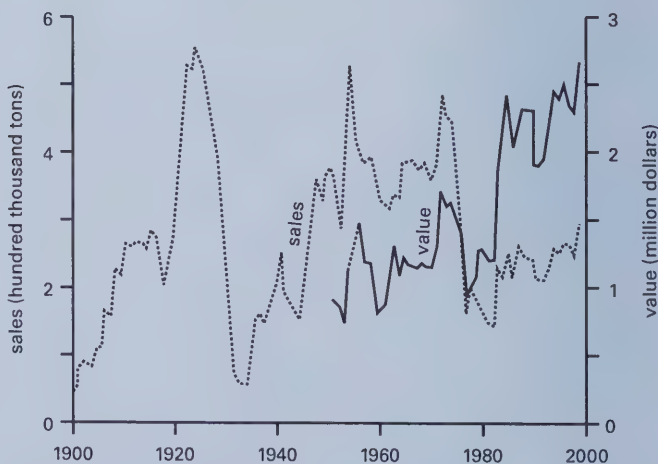


FIGURE 17.—Sales and value of gypsum in Ohio. Value line dashed where data not available. Some figures were calculated because actual figures were not reported in order to maintain confidentiality.



FIGURE 18.—Sales and value of peat in Ohio.



FIGURE 19.—Counties producing salt, gypsum, and peat in Ohio in 1998, and their ranking in sales.



View of the Shelly Materials, Inc., Plant #10 located near Ostrander, Union County. The quarry and processing facility handled 1,985,276 tons of material valued at more than \$9.5 million in 1999. Photo by Michael D. Williams.

OIL AND GAS

This information is summarized from the 1999 Ohio Department of Natural Resources, Division of Oil and Gas Annual Report.

The Division of Oil and Gas issued 660 drilling permits for oil and gas in 1999, a 10.3 percent decrease from 1998. The Division estimates that 499 wells were actually drilled in 1999, a decrease of 18 wells from 1998. Ohio ranks 10th nationally in the number of wells drilled.¹⁷ Wells were drilled in 38 of Ohio's 88 counties, a decrease of 1 county from 1998. The top five counties in number of new wells completed in 1999 were Ashtabula, Washington, Stark, Muskingum, and Wayne. The Division of Oil and Gas received 437 well completion reports; 352 wells were productive and 85 were dry holes for a completion rate of 80.5 percent.

The total reported crude oil production in Ohio in 1999 was 5,968,342 barrels, an 8.8 percent decrease from 1998. Ohio ranks 18th nationally in the volume of crude oil produced.¹⁷ Through 1999, Ohio wells have produced

1,074,591,317 barrels of crude oil. The dollar value of crude oil produced in Ohio in 1999 was \$96,681,166, an increase of 26.0 percent. Average price per barrel in 1999 was \$16.20, a 38.1 percent increase from the 1998 price.

Natural gas production in Ohio in 1999 was 103,540,658 MCF, a 4.6 percent decrease from 1998. This production figure includes an estimated 1,035,407 MCF of gas used on the lease. Through 1999, Ohio wells have produced 7,531,848,404 MCF of natural gas. Ohio ranks 17th nationally in the volume of natural gas produced.¹⁷ The dollar value of natural gas produced in Ohio in 1999 was \$249,118,822, an increase of 2.5 percent from 1998. The value of the estimated volume of gas used on the lease was not used in computing the total dollar value. The average price per MCF in 1999 was \$2.41, an increase of 17 cents per MCF from 1998.

The combined total value of Ohio oil and gas production in 1999 was \$345,799,988, an increase of 8.1 percent from 1998.

¹⁷Information from the Energy Information Administration.

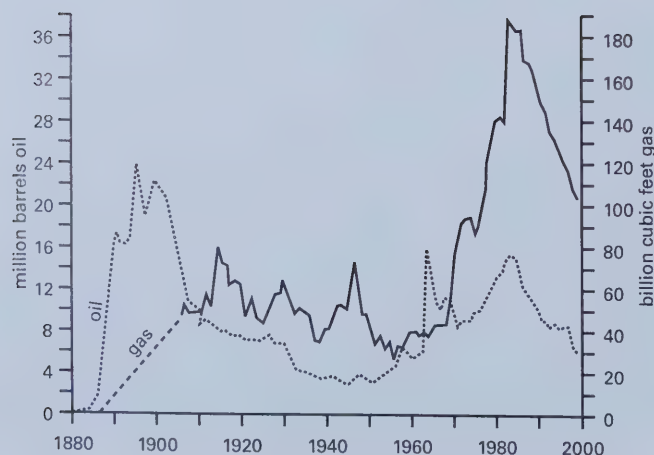


FIGURE 20.—Production of oil and gas in Ohio.

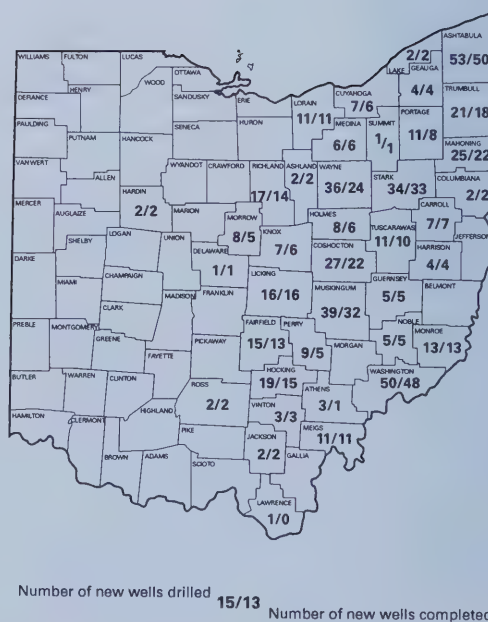


FIGURE 21.—New wells drilled for oil and gas in 1999, by county.

TABLE 28.—1999 Ohio summary of new oil and gas well completions by county

County ¹	Development wells		Exploratory wells		Total wells	Percent productive	Drilled footage		
	Productive	Dry	Productive	Dry			Productive	Dry	Total
Ashland	0	2	0	0	2	0.00	0	3,712	3,712
Ashtabula	41	0	5	4	50	92.00	84,021	23,138	107,159
Athens	1	0	0	0	1	100.00	1,750	0	1,750
Carroll	6	0	0	1	7	85.71	31,742	1,177	32,919
Columbiana	0	1	0	1	2	0.00	0	15,156	15,156
Coshocton	18	1	1	2	22	86.36	82,063	19,217	101,280
Cuyahoga	3	0	2	1	6	83.33	16,849	5,123	21,972
Delaware	1	0	0	0	1	100.00	3,491	0	3,491
Fairfield	8	3	1	1	13	69.23	39,631	16,402	56,033
Geauga	4	0	0	0	4	100.00	15,325	0	15,325
Guernsey	2	0	2	1	5	80.00	14,359	7,439	21,798
Hardin	0	0	0	2	2	0.00	0	3,120	3,120
Harrison	4	0	0	0	4	100.00	2,027	0	2,027
Hocking	4	8	1	2	15	33.33	20,901	41,747	62,648
Holmes	3	1	2	0	6	83.33	28,723	7,249	35,972
Jackson	0	0	0	2	2	0.00	0	7,925	7,925
Knox	0	0	4	2	6	66.67	19,606	9,698	29,304
Lake	2	0	0	0	2	100.00	2,865	0	2,865
Licking	7	1	5	3	16	75.00	54,325	19,355	73,680
Lorain	8	0	2	1	11	90.91	9,560	4,152	13,712
Mahoning	21	0	0	1	22	95.45	118,884	7,872	126,756
Medina	5	1	0	0	6	83.33	14,277	390	14,667
Meigs	11	0	0	0	11	100.00	21,984	1,011	22,995
Monroe	10	1	1	1	13	84.62	41,978	8,350	50,328
Morrow	1	3	1	0	5	40.00	6,250	10,572	16,822
Muskingum	24	3	1	4	32	78.12	111,129	41,567	152,696
Noble	2	0	2	1	5	80.00	13,208	8,085	21,293
Perry	0	2	1	2	5	20.00	4,961	15,420	20,381
Portage	7	1	0	0	8	87.50	42,812	7,501	50,313
Richland	7	5	0	2	14	50.00	14,414	16,793	31,207
Ross	0	0	2	0	2	100.00	7,590	0	7,590
Stark	32	1	0	0	33	96.97	184,040	7,925	191,965
Summit	1	0	0	0	1	100.00	3,516	0	3,516
Trumbull	18	0	0	0	18	100.00	91,226	0	91,226
Tuscarawas	9	0	1	0	10	100.00	49,177	0	49,177
Vinton	0	0	2	1	3	66.67	7,738	3,755	11,493
Washington	42	5	0	1	48	87.50	195,988	15,446	211,434
Wayne	11	8	3	2	24	58.33	75,045	54,933	129,978
TOTAL	313	47	39	38	437	80.55	1,431,455	384,230	1,815,685

¹One well was drilled but not completed in Lawrence County in 1999. No wells were drilled in the following counties in 1999: Adams, Allen, Auglaize, Belmont, Brown, Butler, Champaign, Clark, Clermont, Clinton, Crawford, Darke, Defiance, Erie, Fayette, Franklin, Fulton, Gallia, Greene, Hamilton, Hancock, Henry, Highland, Huron, Jefferson, Logan, Lucas, Madison, Marion, Mercer, Miami, Montgomery, Morgan, Ottawa, Paulding, Pickaway, Pike, Preble, Putnam, Sandusky, Scioto, Seneca, Shelby, Union, Van Wert, Warren, Williams, Wood, and Wyandot.

TABLE 29.—1999 Ohio summary of new oil and gas well completions by geologic unit

Geologic unit	No. of producing wells	No. of dry holes	Total no. of wells	Percent productive	Total footage
Pennsylvanian undifferentiated	9	2	11	81.82	8,798
Upper Mississippian undifferentiated	3	2	5	60.00	8,733
Lower Mississippian "1st & 2nd Berea"	18	5	23	78.26	34,386
Devonian					
Ohio Shale	61	1	62	98.39	104,235
Oriskany	13	1	14	92.86	57,117
Silurian					
Lockport	3	3	6	50.00	9,435
"Clinton-Medina"	159	6	165	96.36	778,946
Lower Ordovician					
Utica-Gull River	5	2	7	71.43	26,688
Beekmantown	11	5	16	68.75	82,677
Cambrian-Ordovician					
Rose Run	51	37	88	57.95	501,901
Cambrian					
Trempealeau	19	20	39	48.72	195,437
Precambrian	0	1	1	0.00	7,332
TOTAL	352	85	437	80.55	1,815,685

TABLE 30.—*Ohio counties¹ and their state-mine-number abbreviations*

<i>County</i>	<i>Abbreviation</i>	<i>County</i>	<i>Abbreviation</i>	<i>County</i>	<i>Abbreviation</i>
Adams	Ads	Hamilton	Hmn	Noble	Ne
Allen	An	Hancock	Hk	Ottawa	Oa
Ashland	Ald	Hardin	Hdn	Paulding	Pg
Ashtabula	Asa	Harrison	Hn	Perry	Py
Athens	As	Henry	Hy	Pickaway	Pky
Auglaize	Ae	Highland	Hd	Pike	Pke
Belmont	Bt	Hocking	Hg	Portage	Pe
Brown	Bn	Holmes	Hs	Preble	Pre
Butler	Br	Huron	Hrn	Putnam	Pm
Carroll	Cl	Jackson	Jkn	Richland	Rd
Champaign	Cpn	Jefferson	Jfn	Ross	Rs
Clark	Ck	Knox	Kx	Sandusky	Sy
Clermont	Ct	Lake	Lke	Scioto	So
Clinton	Cln	Lawrence	Le	Seneca	Sa
Columbiana	Ca	Licking	Lg	Shelby	Shy
Coshocton	Cn	Logan	Lgn	Stark	Sk
Crawford	Cd	Lorain	Ln	Summit	St
Cuyahoga	Cya	Lucas	Ls	Trumbull	Tl
Darke	Dke	Madison	Mdn	Tuscarawas	Ts
Defiance	De	Mahoning	Mg	Union	Un
Delaware	Del	Marion	Mn	Van Wert	Vt
Erie	Ee	Medina	Ma	Vinton	Vn
Fairfield	Fd	Meigs	Ms	Warren	Wan
Fayette	Fe	Mercer	Mr	Washington	Wn
Franklin	Fn	Miami	Mi	Wayne	We
Fulton	Ftn	Monroe	Me	Williams	Ws
Gallia	Ga	Montgomery	My	Wood	Wd
Geauga	Gea	Morgan	Mon	Wyandot	Wt
Greene	Ge	Morrow	Mw		
Guernsey	Gy	Muskingum	Mum		

¹Henry County reported no production or sales of mineral commodities in 1999.

1999 COAL COMPANIES WITH SALES OR PRODUCTION

Company	Number of mines	Production (tons)	Sales (tons)
American Landfill, Inc.	1	23,835	23,835
Anthony Mining Co., Inc.	2	124,655	124,655
Avis Coal Co.	1	32,554	32,554
B & N Coal, Inc.	6	689,815	689,815
Beaver Excavating, Inc.	1	2,850	2,850
Belden Brick Co.	4	16,025	16,025
Bennoc, Inc.	1	53,477	53,476
Blue Jay Enterprises of Ts. Co., Inc.	1	1,085	1,085
Buckeye Industrial Mining Co.	9	793,252	793,252
Buckingham Coal Co., Inc.	4	331,221	329,417
C & E Coal, Inc.	1	8,278	8,278
Cedar Heights Clay Co.	1	385	385
Central Ohio Coal Co.	1	1,099,071	1,016,158
Commercial Minerals, Inc.	2	21,040	21,040
Consolidation Coal Co.	1	806,627	754,536
Copperhead Mining	2	80,091	80,091
Cravat Coal Co.	3	294,811	294,924
D. & D. Mining Co.	1	9,250	14,335
Daron Coal Co., Inc.	1	238,540	238,540
ENZ, Inc.	2	161,784	161,784
ESSROC Cement Corp.	1	6,120	6,120
East Fairfield Coal Co.	1	1,760	1,760
F. & M. Coal Co.	1	9,016	9,016
Harrison Mining Corp.	1	1,474,099	1,862,355
Holmes Limestone Co.	8	633,304	633,304
JM Mining & Reclamation	1	3,588	3,588
K.C.C.I.	1	2,751	2,751
Kimble Clay & Limestone Co.	6	315,523	315,523
L & M Mineral Co.	1	15,231	14,721
Marietta Coal Co.	9	554,004	554,004
Myers Mining	2	31,130	31,130
Northshore Coal, Inc.	2	4,091	4,091
Ohio Valley Coal Co.	1	4,380,337	4,251,512
Oxford Mining Co., Inc.	5	1,580,660	1,580,660
Quarto Mining Co.	1	447,179	1,066,026
Sands Hill Coal Co., Inc.	7	1,260,578	1,260,578
Melvin Schaney	2	8,606	8,606
Schiappa Coal Co., Inc.	1	124,768	124,768
Sidwell Materials, Inc.	1	13,636	13,636
Southern Ohio Coal Co.	2	4,490,926	4,490,926
State Line Resources, Inc.	1	15,166	15,165
Sterling Mining Co.	3	467,148	467,148
Sunnydale Mining	1	1,470	1,470
Thompson Bros. Mining Co.	1	8,196	8,196
Valley Mining, Inc.	4	311,935	311,935
Varkony Mining Co.	2	60,108	60,108
Waterloo Coal Co., Inc.	4	1,511,877	1,511,877
Weslo Inc.	1	18,058	18,058
TOTAL: 48 companies	116	22,539,911	23,286,067

1999 OHIO ALPHABETICAL DIRECTORY OF PRODUCING COAL-MINE OPERATORS

For those mines that have not been assigned a state mine number, a letter designation is used (example: Bt-C).

The designation (u) following the map-location number indicates an underground mine.

To convert short tons to metric tons, multiply the given tonnage by 0.907185.

Name, address, telephone number, and president/ owner/manager of company	Name of mine (and map location number)	County	1999 production (tons)	State mine number	Mining and reclamation permit number
American Landfill, Inc. 7916 Chapel St. SE Waynesburg, OH 44688 330-866-3265 David A. Bower, Jr., pres.	American Landfill, Inc. (631)	Stark	23,835	Sk-246	D-1090
Anthony Mining Co., Inc. P.O. Box 1298 Steubenville, OH 43952 740-282-5301 Albert Carapellotti, pres.	Omaits/Fluharty (756) Lions Club (844)	Jefferson Jefferson	84,233 40,422	Jfn-835 Jfn-AN	D-1063 D-1173
Avis Coal Co. P.O. Box 3373 Zanesville, OH 43702-3373 740-454-2583 James F. Graham, pres.	Drakes (663)	Perry	32,554	Py-A	D-0931
B & N Coal, Inc. P.O. Box 100 Dexter City, OH 45727 740-783-3575 Carl Baker, Jr., pres.	Ullman (514) Lee (627) Estadt (760) Barnes Ridge (799) Friday (866) Shilling Pit (493)	Noble Noble Noble Noble Noble Washington	98,039 72,944 75,754 313,049 50,308 79,721	Ne-151 Ne-155 Ne-BN Ne-BN2 Ne-BN3 Ne-1008	D-0807 D-0958 D-1038 D-1122 D-1194 D-0706
Beaver Excavating, Inc. P.O. Box 6059 Canton, OH 44706 330-478-2151 W. Mark Sterling, pres.	Gavin Plant Landfill (822)	Gallia	2,850	Ga-VFL	IM-1314
Belden Brick Co. P.O. Box 20910 Canton, OH 44701 330-852-2424 Robert F. Belden, pres.	Moomaw Pit (667) Belden Pit (261) Wallick Pit (720) Shanesville Pit (634)	Tuscarawas Tuscarawas Tuscarawas Tuscarawas	1,764 1,678 7,053 5,530	Ts-1517 Ts-1646 Ts-1841 Ts-1939	IM-46 IM-44 IM-45 IM-47
Bennoc, Inc. P.O. Box 208 Morristown, OH 43759 740-782-1330 Larry Conway, pres.	Bennoc-Allison (832)	Belmont	53,477	Bt-BE	D-1159
Blue Jay Enterprises of Ts. Co., Inc. P.O. Box 641 Zoar, OH 44697 330-874-2048 Leland Ervin, pres.	Swonger Pit (783)	Tuscarawas	1,085	Ts-520	IM-214
Buckeye Industrial Mining Co. P.O. Box 389 Lisbon, OH 44432 330-337-9511 John C. Grisham, pres.	Shawver (853) R & T (769) Kiko (835) Mountain Spring #11 (790) (u) Ingledue (856) Benner (817) Witmer (857) Close (802) American (867)	Carroll Carroll Carroll, Stark Columbiana Columbiana Columbiana Columbiana Stark Stark	43,865 21,433 64,660 313,950 18,365 2,625 111,898 135,352 81,104	Cl-BI1 Cl-BIM Sk-BI1 Ca-1003 Ca-B1 Ca-BI1 Ca-BI5 Sk-B Sk-B1	D-1175 D-1107 D-1162 D-0928 D-2003 D-1154 D-1179 D-1123 D-1192
Buckingham Coal Co., Inc. P.O. Box 31 Shawnee, OH 43782-0031 740-394-2644 James F. Graham, pres.	Buckingham No. 2 (851) Bolyard Mine (801) Powderhouse (847) Bristol (848)	Athens Perry Perry Perry	7,495 144,381 33,032 146,313	As-B Py-BC1 Py-BM3 Py-BM4	D-1163 D-1126 D-1157 D-1166
C & E Coal, Inc. P.O. Box 333 Lisbon, OH 44432 330-424-3739 Amos L. Rawson, pres.	C & E Coal, Inc. (59)	Carroll	8,278	Cl-17	D-0282
Cedar Heights Clay Co. 50 Portsmouth Rd. P.O. Box 295 Oak Hill, OH 45656-0295 740-682-7794 William T. Brown, pres.	Harrison (797)	Jackson	385	Jkn-CH2	IM-1302

1999 OHIO ALPHABETICAL DIRECTORY OF PRODUCING COAL-MINE OPERATORS—Continued

Name, address, telephone number, and president/ owner/manager of company	Name of mine (and map location number)	County	1999 production (tons)	State mine number	Mining and reclamation permit number
Central Ohio Coal Co. P.O. Box 98 Cumberland, OH 43732 740-962-2013 Gary Dimmerling, gen. mgr.	Muskingum Mine (228)	Morgan, Noble	1,099,071	Ne-41	D-0678, D-1034, D-1084
Commercial Minerals, Inc. 10900 South Ave. P.O. Box 217 North Lima, OH 44452-0217 330-549-2165 W. Thomas Mackall, pres.	Buckeye Rd. (736) Ketchum-West (688)	Columbiana Columbiana	4,283 16,757	Ca-997 Ca-CM1	D-1051 D-0950
Consolidation Coal Co. 1800 Washington Rd. Pittsburgh, PA 15241-1421 412-831-4000 J. Brett Harvey, sr. v. pres., mining	Mahoning Valley Mine (150)	Harrison	806,627	Hn-700	D-51, D-54, D-334, D-414, D-784
Copperhead Mining P.O. Box 525 Sugarcreek, OH 44681-0525 330-852-4511 Marvin Bates, pres.	Harrison Pit (859) M & M Strip (703)	Harrison Holmes	74,642 5,449	Hn-CC Hs-M	D-1195 D-1021
Cravat Coal Co. 40580 Cadiz-Piedmont Rd. Cadiz, OH 43907 740-942-4656 Michael T. Puskarich, pres.	Wallace (838) Morelli (839) Porter (858)	Harrison Harrison Harrison	63,809 87,093 143,909	Hn-C1 Hn-C2 Hn-C3	D-1169 D-1170 D-1187
D. & D. Mining Co. 3379 E. Garfield Rd. New Springfield, OH 44443 330-549-3127 Donald Thompson, pres.	D. & D. Strip (441)	Columbiana	9,250	Ca-348	D-1002
Daron Coal Co., Inc. 42600 Deersville Ridge Rd. Cadiz, OH 43907 740-942-8223 Ronald Selway, pres.	Standingstone Mine (860)	Harrison	238,540	Hn-D	D-1181
ENZ, Inc. P.O. Box 405 Magnolia, OH 44643 330-866-4510 James R. Demuth, pres.	Fox Pit (831) Sickafoose Pit (246)	Stark Stark	17,014 144,770	Sk-205 Sk-208	D-1144 D-1015
ESSROC Cement Corp. P.O. Box 779 Bessemer, PA 16112 724-667-7702 Robert Rayner, pres. & CEO	Bessemer Pit (625)	Mahoning	6,120	Mg-608	IM-4
East Fairfield Coal Co. 10900 South Ave. P.O. Box 217 North Lima, OH 44452-0217 330-549-2165 W. Thomas Mackall, pres.	Withers-Petersburg (846)	Mahoning	1,760	Mg-631	IM-1103
F. & M. Coal Co. Costonia Rd. Box 171 Toronto, OH 43964 740-544-5203 Edward Fiala, partner	F. & M. Strip (826)	Jefferson	9,016	Jfn-FM	D-1147
Harrison Mining Corp. P.O. Box 176 Cadiz, OH 43907 740-942-8220 Mark McIntire, v. pres.	Nelms Mine-Cadiz Portal (580) (u)	Harrison	1,474,099	Hn-710	D-0426
Holmes Limestone Co. P.O. Box 295 Berlin, OH 44610 330-893-2721 Merle Mullet, pres.	Miley (740) Byesville (745) Walnut Creek (841) Bolivar (363) East Canton (779) Dennison-R & F (723) Stone Creek-Spring (850) Dennison (674)	Coshocton Guernsey Holmes Stark Stark Tuscarawas Tuscarawas Tuscarawas	20,915 27,370 166,126 30,117 123,464 21,217 199,009 45,086	Cn-H1 Gy-327 Hs-H1 Sk-235 Sk-HCC Ts-2043 Ts-H4 Ts-HLC	D-1094 D-1088 D-1176 D-0865 D-1106 D-1047 D-1149 D-0969, D-1028

1999 OHIO ALPHABETICAL DIRECTORY OF PRODUCING COAL-MINE OPERATORS—Continued

Name, address, telephone number, and president/ owner/manager of company	Name of mine (and map location number)	County	1999 production (tons)	State mine number	Mining and reclamation permit number
JM Mining & Reclamation 6807 Roy Andrews Rd. NW New Philadelphia, OH 44663 330-343-9691 John O. Miller, pres.	Yoder Pit (842)	Holmes	3,588	Hs-JM	D-1177
K.C.C.I. P.O. Box 1298 Steubenville, OH 43952 740-543-4389 David Krulock, pres.	Apex (796)	Harrison, Jefferson	2,751	Jfn-K	IM-1164
Kimble Clay & Limestone Co. 3596 State Route 39 W Dover, OH 44622-9801 330-343-1226 Keith B. Kimble, pres.	Kimble Clay & Limestone Co. (262) Kimble Clay & Limestone Co. (598) Kimble Clay & Limestone Co. (784) Kimble Clay & Limestone Co. (830) Kimble Clay & Limestone Co. (868) Kimble Clay & Limestone Co. (640)	Tuscarawas Tuscarawas Tuscarawas Tuscarawas Tuscarawas Tuscarawas	2,368 204,088 26,711 33,283 5,988 43,085	Ts-1727 Ts-2019 Ts-K4 Ts-K5 Ts-K6 Ts-RM	IM-9 D-0852 D-1079 D-1133 D-1183 D-0904
L & M Mineral Co. 5205 State Route 39 Millersburg, OH 44654 330-893-2227 John E. Ling, Jr., pres.	Luikart (267)	Tuscarawas	15,231	Ts-1914	D-0701
Marietta Coal Co. 67705 Friends Church Rd. St. Clairsville, OH 43950 740-695-2197 George Nicolozakes, pres.	Baltimore Coal-Presutti (424) Hostetler-Hapapuro (810) AT&T (604) Daley-Pickenpugh (811) Johnson-Wozniak (812) Taylor-Hamilton et al. (813) Brown et al. (814) Denham et al. (833) Senakiewich (852)	Belmont Belmont Belmont Belmont Belmont Belmont Belmont Belmont Belmont	18,435 138,900 17,129 145,354 43,470 5,955 42,686 62,643 79,432	Bt-1150 Bt-1171 Bt-AT Bt-M3 Bt-M4 Bt-M5 Bt-M6 Bt-M7 Bt-M8	D-0478, D-0597 D-0674 D-0922 D-1134 D-1135 D-1138 D-1152 D-1171 D-1190
Myers Mining P.O. Box 218 Carrollton, OH 44615 330-739-2009 Benjamin A. Erb, owner	Harlem Mine #6 (834) Harlem Mine #7 (854)	Carroll Carroll	30,511 619	Cl-M1 Cl-M2	D-1165 D-2014
Northshore Coal, Inc. 100 W. Main St. St. Clairsville, OH 43950 740-695-7237 Charles F. Dawson, pres.	Uniontown (683) Buckeyeville (648)	Belmont Guernsey	3,644 447	Bt-B Gy-315	D-0998 D-0951
Ohio Valley Coal Co. 56854 Pleasant Ridge Rd. Alledonia, OH 43902 740-926-1351 John Forrelli, pres.	Powhatan #6 (3) (u)	Belmont	4,380,337	Bt-68	D-0360
Oxford Mining Co., Inc. 544 Chestnut St. P.O. Box 427 Coshocton, OH 43812 740-622-6302 Charles C. Ungurean, pres.	Egypt Valley West (731) Cox (837) Adamsville (716) Adamsville 3A (865) Z-Mack (764)	Belmont Coshocton Muskingum Muskingum Perry	275,141 56,484 128,014 536,188 584,833	Bt-RF2 Cn-RF7 Mum-O Mum-RF1 Py-O	D-1062 D-1160 D-1030 D-1164 D-1086
Quarto Mining Co. (subsidiary of Consolidation Coal Co.) 1800 Washington Rd. Pittsburgh, PA 15241-1421 412-831-4000 J. Brett Harvey, sr. v. pres., mining	Powhatan #4 (215) (u)	Monroe	447,179	Me-4	D-0433
Sands Hill Coal Co., Inc. P.O. Box 650 Hamden, OH 45634-0650 740-384-4211 Alan C. Arthur, pres.	Coal Valley (787) Sands Hill Rockcamp II (843) Lincoln (825) Pearce (862) Elk (675) Sands Hill Strip #3 (513) Elk (869)	Gallia Jackson, Vinton Jackson Jackson Vinton Vinton Vinton	220,601 513,692 217,430 3,217 131,376 2,681 171,581	Ga-629 Jkn-S2 Jkn-S3 Jkn-S4 Vn-194 Vn-S Vn-S2	D-1095 D-1087 D-1137 D-2009 D-0973 D-0793 D-1193
Melvin Schaney 47134 Giacobbi Rd. Jewett, OH 43986 740-937-2515 Melvin Schaney, owner	Schaney Mining (748) Schaney Mining (861)	Harrison Harrison	3,637 4,969	Hn-759 Hn-SM	D-1037, D-1151 D-1186

1999 OHIO ALPHABETICAL DIRECTORY OF PRODUCING COAL-MINE OPERATORS—Continued

Name, address, telephone number, and president/ owner/manager of company	Name of mine (and map location number)	County	1999 production (tons)	State mine number	Mining and reclamation permit number
Schiappa Coal Co., Inc. State Route 43 Canton Rd. P.O. Box 728 Steubenville, OH 43952 740-282-5301 Teresa C. Schiappa, pres.	Cherry Valley (795)	Harrison	124,768	Hn-767	D-1124
Sidwell Materials, Inc. 4620 Limestone Valley Rd. Zanesville, OH 43701 740-849-2392 Jeffrey R. Sidwell, pres.	Frank Widmor Coal Co., Inc. (603)	Belmont	13,636	Bt-1190	IM-1089, D-1061
Southern Ohio Coal Co. P.O. Box 490 Athens, OH 45701 740-286-5051 Charles A. Ebetino, gen. mgr.	Meigs Mine # 31 (300) (u) Meigs Mine #2 (213) (u)	Gallia, Meigs Meigs, Vinton	2,395,622 2,095,304	Ms-293 Ms-294	D-0354, D-0463 D-0355
State Line Resources, Inc. P.O. Box 419 Negley, OH 44441 330-426-9611 Charles H. Muse, Jr., pres.	State Line Resources, Inc. (855)	Columbiana	15,166	Ca-505	IM-13, IM-936
Sterling Mining Co. 10900 South Ave. P.O. Box 217 North Lima, OH 44452 330-549-2165 W. Thomas Mackall, pres.	Sterling North (657) (u) Sterling South (758) (u) S-Brush Creek (845)	Jefferson Jefferson Jefferson	258,504 208,506 138	Jfn-823 Jfn-ST Jfn-ST1	D-0949 D-1019 D-1161
Sunnydale Mining 88740 Fairview Rd. Jewett, OH 43986 740-946-4291 Robert Stewart, owner	Happel (749)	Harrison	1,470	Hn-761	D-1082, D-1097
Thompson Bros. Mining Co. 3379 E. Garfield Rd. New Springfield, OH 44443 330-549-3979 J. E. Thompson, owner	Thompson Mining Co. (864)	Mahoning	8,196	Mg-T	D-1168
Valley Mining, Inc. 4412 Pleasant Valley Rd. SE Dennison, OH 44621 740-922-3942 Mary J. Brown, pres.	Egypt Valley (732) Snyder-Bush (696) Piergallini (709) Elliott-Smith (806)	Belmont Guernsey Jefferson Tuscarawas	215,290 41,618 29,817 25,210	Bt-VM Gy-318 Jfn-831 Ts-VM	D-1059 D-1025 D-1026 D-1125
Varkony Mining Co. P.O. Box 427 Hopedale, OH 43976 740-937-2777 Stephen & William Varkony, partners	Tony Pit (146) JWP (863)	Harrison Jefferson	50,094 10,014	Hn-217 Jfn-V2	D-0440 D-1185
Waterloo Coal Co., Inc. P.O. Box 626 Jackson, OH 45640 740-682-7787 T. L. Darlington, Jr., pres.	Bowman Strip (165) Green Pit (418) Allied Pit (420) Dundas Pit (602)	Jackson Vinton Vinton Vinton	685,315 6,342 212,700 607,520	Jkn-367 Vn-182 Vn-184 Vn-191	D-0594, D-968, D-1083, D-1167 D-0631 D-0609 D-0867, D-0957, D-1004
Weslo Inc. P.O. Box 938 Coshocton, OH 43812 740-623-0660 Paul E. Bryant, pres.	Weslo-Conesville (819)	Coshocton	18,058	Cn-B	D-1142

1999 OHIO DIRECTORY OF COAL-PREPARATION PLANTS AND ASSOCIATED FACILITIES, BY COUNTY

For those mines that have not been assigned a state mine number, a letter designation is used (example: Bt-C).

County	Name, address, telephone number, and president/owner/manager of company	Name of plant (and map location number for coal-preparation plants)	Township	State mine number	Mining and reclamation permit number	Type of facility
Belmont	Cravat Coal Co. 40580 Cadiz-Piedmont Rd. Cadiz, OH 43907 740-942-4656 Michael Puskarich, pres.	Bellaire Dock Holloway Tipple	Pultney Flushing	Bt-876 Bt-963	D-0687 D-0763	loading dock tipple
	Marietta Coal Co. 67705 Friends Church Rd. St. Clairsville, OH 43950 740-695-2197 George Nicolozakes, pres.	Loading Dock (3)	Pultney	Bt-936	D-0216	loading dock, prep plant—jig, flotation, centrifugal dryer, crushers, screens
	Ohio River Collieries, Inc. P.O. Box 128 Bannock, OH 43972 740-968-3582 Tony Gentile, pres.	Lafferty Tipple Lafferty Truck Shop	Union Union	Bt-947 Bt-1093	D-0773 D-0773	tipple shop
	Ohio Valley Coal Co. 56854 Pleasant Ridge Rd. Alledonia, OH 43902 216-765-1240 Robert E. Murray, pres.	Powhatan #6 (4)	Smith, Washington	Bt-68	D-0360	prep plant—jigs, cyclones, centrifuges, thickeners, filters, screens
	Ohio Valley Transloading Co. 56854 Pleasant Ridge Rd. Alledonia, OH 43902 216-765-1240 Robert E. Murray, pres.	Harbour Facility	York	Bt-1198		dock
	R & F Coal Co. 538 North Main St. Cadiz, OH 43907 740-942-2186 Arthur R. Thomas, pres.	Bellaire Dock	City of Bellaire	Bt-832	D-0838	dock
	Rayle River Coal 67705 Friends Church Rd. St. Clairsville, OH 43950 740-695-2197 George Nicolozakes, pres.	Rayle River Terminal	Pultney	Bt-1191		coal transfer facility
Columbiana	Buckeye Industrial Mining Co. P.O. Box 389 Lisbon, OH 44432 330-337-9511 John C. Grisham, pres.	Kensington Preparation Plant (5)	West	Ca-879	D-0806	prep plant—heavy-media washer cyclone, centrifuges, breaker
	State Line Resources, Inc. State Route 154 Negley, OH 44441 330-426-9611 Charles H. Muse, Jr., pres.	State Line Resources, Inc. (33)	Middleton	Ca-505	D-0223	prep plant—crushers, cyclones, screens
Coshocton	Conesville Coal Preparation Co. 14561 Twp. Rd. 263 Conesville, OH 43811 740-829-2392 H. D. Leppla, gen. mgr.	Conesville Coal Preparation Co. (7)	Franklin	Cn-810		prep plant—jig, cyclones, froth cells, flotation, filter press, screens, dryers
	Oxford Mining Co., Inc. 1811 Cambridge Rd. P.O. Box 427 Coshocton, OH 43812 740-622-6302 Charles C. Ungurean, pres.	Lori Tipple	Franklin	Cn-736	D-0671	tipple
	R & F Coal Co. 538 North Main St. Cadiz, OH 43907 740-942-2186 Arthur R. Thomas, pres.	Barb Tipple	Franklin	Cn-748	D-0661	tipple
	Sugarcreek Clay & Limestone, Inc. P.O. Box 402 Sugarcreek, OH 44681 330-852-4440 Daniel D. Miller, pres.	Sugarcreek Tipple	Crawford	Cn-825	D-0801	tipple

**1999 OHIO DIRECTORY OF COAL-PREPARATION PLANTS AND
ASSOCIATED FACILITIES, BY COUNTY — Continued**

County	Name, address, telephone number, and president/owner/manager of company	Name of plant (and map location number for coal-preparation plants)	Township	State mine number	Mining and reclamation permit number	Type of facility
Gallia	Sands Hill Coal Co., Inc. P.O. Box 650 Hamden, OH 45634-0650 740-384-4211 Alan C. Arthur, pres.	Sands Hill Coal Co., Inc.	Addison	Ga-183	D-0834	tipple
	Waterloo Coal Co., Inc. P.O. Box 626 Jackson, OH 45640 740-682-7787 T. L. Darlington, Jr., pres.	Waterloo Dock #1 Waterloo Dock #2	Addison Addison	Ga-229 Ga-216	D-0725 D-0739	dock, tipple dock
Harrison	Cravat Coal Co. 40580 Cadiz-Piedmont Rd. Cadiz, OH 43907 740-942-4656 Michael Puskarich, pres.	22 Shop	Moorefield	Hn-230		shop
	Harrison Processing Corp. 86395 Mine Rd. P.O. Box 250 Hopedale, OH 43976 740-937-2615 Mark McIntire, v. pres.	Nelms Prep Plant (30)	Green	Hn-169	D-0424	prep plant—heavy-media vessel, heavy-media cyclones, spirals, dryers, thickeners, crushers, screens
	R & F Coal Co. 538 North Main St. Cadiz, OH 43907 740-942-2186 Arthur R. Thomas, pres.	Cadiz Machine Shop	Cadiz	Hn-709		shop
Jackson	Waterloo Coal Co., Inc. P.O. Box 626 Jackson, OH 45640 740-682-7787 T. L. Darlington, Jr., pres.	Bowman Strip (10)	Jefferson, Madison	Jkn-367	D-0285	prep plant—jig, crushers, breaker, screens, dryers, wash tables
Lawrence	Collins Mining Co. 981 State Route 650 Ironton, OH 45638-8600 740-534-9445 C. E. Collins, v. pres.	River Dock	Hamilton	Le-415	D-0777	dock
Mahoning	Thompson Bros. Mining Co. 3379 E. Garfield Rd. New Springfield, OH 44443 330-549-3979 J. E. Thompson, owner	Thompson Bros. Mining Co.	Springfield	Mg-588	D-0711	tipple
Meigs	Southern Ohio Coal Co. P.O. Box 490 Athens, OH 45701 740-286-5051 Charles A. Ebetino, v. pres.	Meigs Mine No. 31 (14)	Salem	Ms-293	D-0354	prep plant—heavy-media washers, flotation, cyclones, centrifuges, thickeners, filters, breaker, screens
	Waterloo Coal Co., Inc. P.O. Box 626 Jackson, OH 45640 740-682-7787 T. L. Darlington, Jr., pres.	Waterloo Dock #3	Salisbury	Ms-285	D-0698	tipple, dock
Monroe	Quarto Mining Co. (subsidiary of Consolidation Coal Co.) 1800 Washington Rd. Pittsburgh, PA 15241-1421 412-831-4000 J. Brett Harvey, sr. v. pres., mining	Powhatan #4 (15)	Salem	Me-8	D-0422	prep plant—jigs, cyclones, centrifuges, thickeners, filters, crushers
Morgan	Central Ohio Coal Co. P.O. Box 98 Cumberland, OH 43732 740-454-1121 Gary Dimmerling, gen. mgr.	Muskingum Mine (16)	Meigsville	Ne-41	D-0378, D-0420	tipple, prep plant—jigs, flotation, cyclones, thickener, filters, crushers, breakers, screens, magnets
Perry	Crooksville Coal Co., Inc. P.O. Box 149 Crooksville, OH 43731 740-982-6651 Ralph L. Allen, pres.	Crooksville Tipple	Salt Creek	Py-339	D-0692	tipple

**1999 OHIO DIRECTORY OF COAL-PREPARATION PLANTS AND
ASSOCIATED FACILITIES, BY COUNTY — Continued**

County	Name, address, telephone number, and president/owner/manager of company	Name of plant (and map location number for coal-preparation plants)	Township	State mine number	Mining and reclamation permit number	Type of facility
Scioto	Norfolk Southern Railroad 914 Hayport Rd. Wheelersburg, OH 45694 740-574-8491 Charles G. Howard, asst. to mgr.	NS Wheelersburg Terminal	Porter	So-96		dock
Tuscarawas	Central Fuel Co. County Rd. 55 P.O. Box 165 New Philadelphia, OH 44663 330-339-5049 Keith B. Kimble, gen. mgr.	Central Fuel Co. (20)	York	Ts-1938	D-0264	prep plant—jig, screen, dryers
	Copperhead Mining P.O. Box 525 Sugarcreek, OH 44681-0525 330-852-4511 Edward Gauss, pres.	Copperhead Tipple Barrs Mills Tipple	Sugar Creek, Wayne Sugar Creek	Ts-MM Ts-MM1	D-0652 D-0876	tipple tipple
	Holmes Limestone Co. P.O. Box 295 Berlin, OH 44610 330-893-2721 Merle Mullet, pres.	Strasburg Wash Plant (21) Slurry Wash Plant (32)	Franklin, Lawrence Franklin, Lawrence	Ts-1942 Ts-HC	D-0287 D-0981	prep plant—jigs, cyclones, centrifuges, crushers, screens, picking tables prep plant—cyclones
Vinton	Sands Hill Coal Co., Inc. P.O. Box 650 Hamden, OH 45634-0650 740-384-4211 Alan C. Arthur, pres.	Sands Hill Tipple/ Preparation Plant (24)	Clinton	Vn-641	D-0169, D-0309	tipple, prep plant—heavy-media washers, flotation, cyclones, centrifuge, crushers, screens, dryer, picking tables, magnets
	Waterloo Coal Co., Inc. P.O. Box 626 Jackson, OH 45640 740-682-7787 T. L. Darlington, Jr., pres.	Benedict Tipple (22) Dundas Tipple	Swan Clinton	Vn-145 Vn-178	D-0159 D-0185	tipple, prep plant—heavy-media washer, cyclone, crusher, conveyors tipple



Front view of an asphalt paver at I-270 and Sawmill Road in northern Franklin County. The paver operator is Morgan Gibbons and his helper is Jackson Shafer of The Shelly Company. Photo by Michael D. Williams.

1999 OHIO DIRECTORY OF PRODUCING COAL-MINE OPERATORS, BY COUNTY

NOTE: This directory lists only the coal-producing operations. It does not list tipples, loading docks, preparation plants, or other active, nonproducing operations that would contribute to employment and wage statistics presented in tables 11-17. For those mines that have not been assigned a state mine number, a letter designation is used (example: Bt-C). There is no correlation between the "Seam Number" column and the "Production Tonnage" column. The Seam Number column represents the seams mined at the operation. No production tonnage is listed by seam. Days in production were estimated for those companies not providing this information. To convert short tons to metric tons, multiply the given tonnage by 0.907185.

SEAM IDENTIFICATION OF PRINCIPAL OHIO COALS

1 Sharon	4 Brookville	6A Lower Freeport	9 Meigs Creek
2 Quakertown	4A Clarion	7 Upper Freeport	11 Waynesburg
3 Lower Mercer	5 Lower Kittanning	7A Mahoning	12 Washington
3A Upper Mercer	5A Strasburg	8 Pittsburgh	H Harlem
3B Tonesta	6 Middle Kittanning	8A Pomeroy-Redstone	W Winters

Name of company	Name of mine	Township	Seam		Type of mine	Production		Days in production in 1999	Disposition		Employment			State mine number
			Number	Thickness (inches)		Method	Tonnage		Method	Tonnage	Underground	Production surface	Non-production	
ATHENS COUNTY—Total production = 7,495 tons														
Buckingham Coal Co., Inc.	Buckingham No. 2	Trimble	7	24	surface	strip	7,495	22	truck	1,538	2		As-B	
BELMONT COUNTY—Total production = 5,495,529 tons														
Bennoc, Inc. Marietta Coal Co. ¹	Bennoc-Allison	Wayne	12	36	surface	strip	53,477	200	truck	53,476	4	10	Bt-BE	
	Hostetler-Hapapuro	Colerain	9		surface	strip auger Total	125,869 13,031 138,900	240	water	138,900	12	2	Bt-1171	
	Daley-Pickenpaugh	Colerain, Richland	9 11	40 24	surface	strip auger Total	85,094 60,260 145,354	240	water	145,354	12	3	Bt-M3	
	AT&T	Kirkwood, Union	8		surface	strip auger Total	13,537 3,592 17,129	100	water	17,129	2	1	Bt-AT	
	Taylor-Hamilton et al.	Pease		9 11	38 32	surface	strip auger Total	3,036 2,919 5,955	100	water	5,955	1		Bt-M5
	Baltimore Coal-Presutti	Pultney	9 11		surface	strip auger Total	11,635 6,800 18,435	100	water	18,435	2	1	Bt-1150	
	Johnson-Wozniak	Pultney, Richland	9 11	60 60	surface	strip auger Total	28,913 14,557 43,470	200	water	43,470	6	2	Bt-M4	
	Denham et al.	Richland, Wheeling			surface	strip auger Total	54,249 8,394 62,643	240	water	62,643	6	2	Bt-M7	
	Brown et al.	Union	9		surface	strip auger Total	9,702 32,984 42,686	240	water	42,686	6	2	Bt-M6	
	Senakiewich	Wheeling			surface	strip auger Total	49,365 30,067 79,432	200	water	79,432	8	2	Bt-M8	

Northshore Coal, Inc.	Uniontown	Wheeling	8 9	56 40	surface	strip	3,644	42	truck	3,644	1	Bt-B
Ohio Valley Coal Co.	Powhatan #6	Smith, Washington	8	62	slope	longwall cont. miner Total	3,587,597 792,740 4,380,337	361	rail truck Total	3,050,780 1,200,732 4,251,512	249	Bt-68
Oxford Mining Co., Inc.	Egypt Valley West	Kirkwood, Warren	8 9	50 36	surface	strip auger Total	258,186 16,955 275,141	279	truck	275,141	18	Bt-RF2
Sidwell Materials, Inc.	Frank Widmor Coal Co., Inc.	Pultney	8 9	72 46	surface	strip auger Total	7,102 6,534 13,636	80	truck	13,636	2	Bt-1190
Valley Mining, Inc.	Egypt Valley	Kirkwood, Warren	9	36	surface	strip auger Total	197,782 17,508 215,290	251	truck	215,290	10	Bt-VM
CARROLL COUNTY—Total production = 150,048 tons												
Buckeye Industrial Mining Co.	Kiko	Brown	6	28	surface	strip auger Total	37,446 7,896 45,342	309	truck	45,342	3	Sk-B11 ²
C & E Coal, Inc.	R & T Shawver	Fox Perry	7A H	24 24	surface	strip	21,433	56	truck	21,433	1	Cl-BIM
	C & E Coal, Inc.	Rose	6	41	surface	strip auger Total	21,433 43,865 5,992 2,286 8,278	250	truck	43,865	3	Cl-B11
Myers Mining	Harlem Mine #6	Perry	H	18	surface	strip	30,511	300	truck	30,511	4	Cl-M1
	Harlem Mine #7	Perry, Lee	H	18	surface	strip	619	11	truck	619	1	Cl-M2
COLUMBIANA COUNTY—Total production = 492,294 tons												
Buckeye Industrial Mining Co.	Inglehue Benner	Center	7A	24	surface	strip	18,365	57	truck	18,365	1	Ca-B1
	Mountain Spring #11	Madison	7A	24	surface	strip	2,625	10	truck	2,625	1	Ca-B11
	Witmer	Wayne, Franklin, Center	7A	37	drift	cont. miner	313,950	300	truck	313,950	6	Ca-1003
			7A	28	surface	strip auger Total	85,337 26,561 111,898	298	truck	111,898	5	Ca-B15
Commercial Minerals, Inc.	Ketchum-West	Center, Wayne	7	30	surface	strip auger Total	8,373 8,384 16,757	141	truck	16,757	2	Ca-CM1
D. & D. Mining Co.	Buckeye Rd.	Madison	7	36	surface	strip	4,283	80	truck	4,283	1	Ca-997
	D. & D. Strip	Unity	6 4	29 27	surface	strip	9,250	31	truck	14,335	2 4	Ca-348
	State Line Resources, Inc.	Middleton	5 6 5	12 8 22	surface	auger	15,166	96	truck	15,165	1 3 4	Ca-505
COSHOCTON COUNTY—Total production = 95,457 tons												
Holmes Limestone Co.	Miley	Mill Creek	5, 6	30	surface	strip	20,915	215	truck	20,915	4	Cn-H1
Oxford Mining Co., Inc.	Cox	Virginia	6	30	surface	strip	56,484	220	truck	56,484	4	Cn-RF7
Weslo Inc.	Weslo-Conesville	Franklin, Virginia	5	48	surface	strip	18,058	22	truck	18,058	1	Cn-B
GALLIA COUNTY—Total production = 1,856,134 tons												
Beaver Excavating, Inc.	Gavin Plant Landfill	Cheshire	8A	42	surface	strip	2,850	2	truck	2,850	1	Ga-VFL
Sands Hill Coal Co., Inc.	Coal Valley	Huntington	6 6A	70 12	surface	strip	220,601	274	water truck conveyor Total	7,713 52,381 160,507 220,601	18 3	Ga-629

¹Employment estimated for all Marietta Coal Co. operations.
²See also Stark County.

1999 OHIO DIRECTORY OF PRODUCING COAL-MINE OPERATORS, BY COUNTY—Continued

Name of company	Name of mine	Township	Seam		Type of mine	Production		Days in production in 1999	Disposition		Employment		State mine number
			Number	Thick-ness (inches)		Method	Tonnage		Method	Tonnage	Under-ground	Sur-face	
GALLIA COUNTY (continued)													
Southern Ohio Coal Co.	Meigs Mine #31	Cheshire	4A	54	shaft	longwall cont. miner Total	1,387,743 244,940 1,632,683	285	conveyor	1,632,683	161		Ms-293 ³
GUERNSEY COUNTY—Total production = 69,435 tons													
Holmes Limestone Co. Northshore Coal, Inc. Valley Mining, Inc.	Byesville Buckeyeville Snyder-Bush	Jackson Jackson Wheeling	7 7 6	30 66 27	surface surface surface	strip strip strip auger Total	27,370 447 28,912 12,706 41,618	152 140 238	truck truck truck	27,370 447 41,618	2 3 6		Gy-327 Gy-315 Gy-318
HARRISON COUNTY—Total production = 3,075,032 tons													
Consolidation Coal Co. Copperhead Mining	Mahoning Valley Mine Harrison Pit	Athens German, Rumley	9 8 8A 9 10	42	surface surface	strip strip auger Total	806,627 71,361 3,281 74,642	241 255	truck truck	754,536 74,642	43 6		Hn-700 Hn-CC
Cravat Coal Co.	Porter Morelli Wallace	Cadiz Cadiz Moorefield	8 8 8	44 38 42	surface surface surface	strip strip strip	143,909 87,093 63,809	81 90 48	truck truck truck	143,909 87,093 63,922	4 3 3		Hn-C3 Hn-C2 Hn-C1
Daron Coal Co., Inc.	Standingstone Mine	Cadiz	8 8A 9	54 18 34	surface	strip auger Total	187,370 51,170 238,540	303	truck	238,540	13		Hn-D
Harrison Mining Corp.	Nelms Mine-Cadiz Portal	Green	6A	60	slope	cont. miner	1,474,099	361	rail water truck other Total	1,720,173 118,072 22,470 1,640 1,862,355	130		Hn-710
K.C.C.I. Melvin Schaney	Apex Schaney Mining Schaney Mining Cherry Valley	German Green Green Green	8 8 8 8	48 38 30 56	surface surface surface surface	strip strip strip strip	1,375 3,637 4,969 124,768	5 29 34 247	truck truck truck truck	1,375 3,637 4,969 124,768	1 1 1 17		Jfn-K ⁴ Hn-759 Hn-SM Hn-767
Sunnydale Mining Varkony Mining Co.	Happel Tony Pit	Archer Green	8 8 8A	60 54 16	surface surface surface	strip strip auger Total	1,470 44,483 5,611 50,094	18 204	truck truck	1,470 50,094	1 5		Hn-761 Hn-217
HOLMES COUNTY—Total production = 175,163 tons													
Copperhead Mining Holmes Limestone Co. JMM Mining & Reclamation	M & M Strip Walnut Creek Yoder Pit	Walnut Creek Walnut Creek Walnut Creek	5 5, 6 6	30 22	surface surface surface	strip strip strip	5,449 166,126 3,588	61 284 40	truck truck truck	5,449 166,126 3,588	4 10 1		Hs-M Hs-H1 Hs-JM
JACKSON COUNTY—Total production = 1,163,193 tons													
Cedar Heights Clay Co. Sands Hill Coal Co., Inc.	Harrison Lincoln	Madison Jackson	5 W 4A 5 6 7	36 48 36 18 18	surface surface	strip strip	385 217,430	10 150	truck water truck conveyor Total	385 7,603 51,628 158,199 217,430	1		Jkn-CH2 Jkn-S3
Sands Hill Rockcamp II		Milton	4A 5 6 6A	48 36 18 21	surface	strip	256,846	132	water truck conveyor Total	8,981 60,987 186,878 256,846	25		Jkn-S2 ⁵

Pearce	Milton	4A	48	surface	strip	3,217	258	water truck conveyor Total	112 763 2,342 3,217			Jkn-S4
Waterloo Coal Co., Inc.	Bloomfield, Madison, Jefferson	3 4A 5 6	24 14 40 48	surface	strip	685,315	258	truck	685,315	52	49	Jkn-367
JEFFERSON COUNTY—Total production = 642,026 tons												
Anthony Mining Co., Inc.	Smithfield	8 8A	56 20	surface	strip auger Total	37,337 3,085 40,422		truck	40,422	11	4	Jfn-AN
	Smithfield, Wayne	8 8A	56 20	surface	strip auger Total	77,043 7,190 84,233	226	truck	84,233	8	5	Jfn-885
F. & M. Coal Co. K.C.C.I. Sterling Mining Co.	Wayne Springfield Brush Creek S-Brush Creek Sterling North Sterling South Piergallini JWP	8 8 7 7A 7A 8A	54 48 36 36 36 22 54	surface surface drift drift surface	strip strip strip cont. miner cont. miner strip	9,016 1,376 138 258,504 208,506 29,817 10,014	311 50 5 230 203 249 56	truck truck truck truck truck truck truck	9,016 1,376 138 258,504 208,506 29,817 10,014	3 1 1 35 35 5 1		Jfn-FM Jfn-K* Jfn-ST1 Jfn-823 Jfn-ST Jfn-831 Jfn-V2
MAHONING COUNTY—Total production = 16,076 tons												
ESSROC Cement Corp. East Fairfield Coal Co. Thompson Bros. Mining Co.	Poland Springfield Beaver	5 4 4	22 22	surface surface surface	strip strip strip	6,120 1,760 8,196	60 38 36	truck truck truck	6,120 1,760 8,196	5 1 2	2	Mg-608 Mg-631 Mg-T
Southern Ohio Coal Co.	Columbia	4A	57	shaft	longwall cont. miner Total	213,272 45,463 258,735	35	conveyor	258,735		17	Ms-294 ⁷
	Salem	4A	54	shaft	longwall cont. miner Total	648,481 114,458 762,939	183	conveyor	762,939		154	Ms-293 ⁸
MONROE COUNTY—Total production = 447,179 tons												
Quarto Mining Co. (subsidiary of Consolidation Coal Co.)	Salem	8	60	shaft	longwall	447,179	53	water	1,066,026		46	Me-4
MORGAN COUNTY—Total production = 940,255 tons												
Central Ohio Coal Co.	Bristol, Manchester, Meigsville	9	48	surface	strip auger Total	903,765 36,490 940,255	193	conveyor	868,818	40	143	Ne-41 ⁹
MUSKINGUM COUNTY—Total production = 664,202 tons												
Oxford Mining Co., Inc.	Madison	6, 6A		surface	strip auger Total	86,896 41,118 128,014	242	truck	128,014	10	3	Mum-O
	Madison	6 6A	33 23	surface	strip auger Total	520,118 16,070 536,188	254	truck	536,188	42	4	Mum-RF1

³See also Meigs County.⁴See also Jefferson County.⁵Employment reported for Jkn-S2 is a summary for all Sands Hill Coal Co., Inc., operations in Jackson County. See also Vinton County.⁶See also Harrison County.⁷See also Vinton County.⁸See also Gallia County.⁹See also Noble County.

1999 OHIO DIRECTORY OF PRODUCING COAL-MINE OPERATORS, BY COUNTY—Continued

Name of company	Name of mine	Township	Seam		Type of mine	Production		Days in production in 1999	Disposition		Employment		State mine number	
			Number	Thickness (inches)		Method	Tonnage		Method	Tonnage	Underground	Production		Non-production
NOBLE COUNTY—Total production = 768,910 tons														
B & N Coal, Inc.	Lee	Elk	9	30	surface	strip	72,944	245	truck	72,944		8	1	Ne-155
	Ullman	Elk	9	30	surface	strip	98,039	258	truck	98,039		7	1	Ne-151
	Estadt	Stock	9	30	surface	strip	75,754	258	truck	75,754		8	1	Ne-BN
	Barnes Ridge	Marion	9	42	surface	strip	313,049	258	truck	313,049		21	1	Ne-BN2 ¹⁰
	Friday	Marion	9	42	surface	strip	50,308		truck	50,308				Ne-BN3
Central Ohio Coal Co.	Muskingum Mine	Sharon	9	48	surface	strip	152,652	193	conveyor	147,340		7	13	Ne-41 ¹¹
						auger	6,164							
						Total	158,816							
PERRY COUNTY—Total production = 941,113 tons														
Avis Coal Co.	Drakes	Monroe	6	144	surface	strip	32,554	63	truck	32,554		2	1	Py-A
	Bolyard Mine	Monroe, Pleasant	6	60	surface	strip	96,015	201	truck	144,381		11	5	Py-BC1
						auger	48,366							
						Total	144,381							
Oxford Mining Co., Inc.	Bristol	Pike	6	38	surface	strip	141,629	178	truck	148,597		11	4	Py-BM4
						auger	4,684							
						Total	146,313							
Oxford Mining Co., Inc.	Powderhouse	Salt Lick	6	60	surface	strip	33,032	36	truck	34,901		3	1	Py-BM3
	Z-Mack	Clayton, Pike	5, 6		surface	strip	568,763	254	truck	584,883		35	14	Py-O
						auger	16,070							
						Total	584,833							
STARK COUNTY—Total production = 574,974 tons														
American Landfill, Inc.	American Landfill, Inc.	Sandy	5	30	surface	strip	23,835	28	truck	23,835		1		Sk-246
	Kiko	Osnaburg	6	28	surface	strip	15,954	309	truck	19,318		2	1	Sk-B11 ¹²
						auger	3,364							
						Total	19,318							
ENZ, Inc.	Close	Pike	5	24	surface	strip	135,352	172	truck	135,352		6	1	Sk-B
	American	Sandy	5	26	surface	strip	81,104	116	truck	81,104		4	1	Sk-B1
	Fox Pit	Sandy	4	22	surface	strip	17,014	149	truck	17,014		1		Sk-205
	Sickafosse Pit	Sandy, Pike	4	48	surface	strip	144,770	304	truck	144,770		23	6	Sk-208
Holmes Limestone Co.	Bolivar	Bethlehem	5, 6	30	surface	strip	30,117	180	truck	30,117		3		Sk-235
	East Canton	Osnaburg	5, 6	30	surface	strip	123,464	276	truck	123,464		9		Sk-HCC
TUSCARAWAS COUNTY—Total production = 638,386 tons														
Belden Brick Co.	Belden Pit	Sugar Creek	4	12	surface	strip	1,678	5	truck	1,678		1	1	Ts-1646
			3B	49	surface	strip	1,764	5	truck	1,764		1		Ts-1517
	Moomaw Pit	Sugar Creek	3B	48	surface	strip	5,530	15	truck	5,530		1		Ts-1939
	Shanesville Pit	Sugar Creek	4	18	surface	strip	7,053	5	truck	7,053		1		Ts-1841
	Wallick Pit	Wayne, Franklin	4	12	surface	strip	1,085	5	truck	1,085		1		Ts-520
Blue Jay Enterprises of Ts. Co., Inc.	Swonger Pit	Sandy	4	18	surface	strip	1,085	5	truck	1,085		1		Ts-520
Holmes Limestone Co.	Dennison-R & F	Rush	5, 6	30	surface	strip	14,442	90	truck	21,217		2		Ts-2043
						auger	6,775							
						Total	21,217							
Dennison Stone Creek-Spring	Dennison	Rush	7	30	surface	strip	45,086	172	truck	45,086		5		Ts-HLC
	Stone Creek-Spring	York	5, 6	30	surface	strip	174,657	294	truck	199,009		10		Ts-H4
						auger	24,352							
						Total	199,009							

Kimble Clay & Limestone Co.	Kimble Clay & Limestone Co.	York	5 6	28 36	surface	strip auger Total	175,007 29,081 204,088	263	truck	204,088	12	4	Ts-2019
	Kimble Clay & Limestone Co.	Dover	4 6	20 36	surface	strip	2,368	9	truck	2,368	4	1	Ts-1727
	Kimble Clay & Limestone Co.	Dover	5, 6 3, 4	36	surface	strip	5,988	5	truck	5,988	1		Ts-K6
	Kimble Clay & Limestone Co.	Sugar Creek			surface	strip	24,730	67	truck	26,711	3		Ts-K4
						auger Total	1,981 26,711						
	Kimble Clay & Limestone Co.	Washington	7		surface	strip auger Total	22,379 10,904 33,283	153	truck	33,283	3		Ts-K5
	Kimble Clay & Limestone Co.	York	5, 6		surface	strip auger Total	28,078 15,007 43,085	146	truck	43,085	3		Ts-RM
L & M Mineral Co.	Luikart	Mill, Warwick	5, 6		surface	strip auger Total	6,016 9,215 15,231	32	truck	14,721	2	1	Ts-1914
Valley Mining, Inc.	Elliott-Smith	Salem	6	36	surface	strip auger Total	23,826 1,384 25,210	228	truck	25,210	3	2	Ts-VM
VINTON COUNTY—Total production = 3,225,615 tons													
Sands Hill Coal Co., Inc.	Sands Hill Strip #3	Clinton	W	36	surface	strip	2,681	120	water truck conveyor Total	94 637 1,950 2,681	14	63	Vn-S ¹³
	Elk	Elk	4 W 4A	24 32 28	surface	strip	131,376	195	water truck conveyor Total	4,594 31,195 95,587 131,376			Vn-194
	Elk	Elk	4 W 4A	36 30 28	surface	strip	171,581	195	water truck conveyor Total	5,999 40,741 124,841 171,581			Vn-S2
	Sands Hill Rockcamp II	Wilkesville	4A 5 6 6A	48 36 18 21	surface	strip	256,846	264	water truck conveyor Total	8,981 60,987 186,878 256,846			Jkn-S2 ¹⁴
Southern Ohio Coal Co.	Meigs Mine #2	Vinton	4A	54	shaft	longwall cont. miner Total	1,513,862 322,707 1,836,569	247	conveyor	1,836,569	200	75	Ms-294 ¹⁵
Waterloo Coal Co., Inc.	Dundas Pit	Clinton	3 4A 5 6 7	50 36 45 20 18	surface	strip	607,520	239	truck	607,520	44	20	Vn-191
	Allied Pit	Elk	4 4A 5 6	18 32 24 18	surface	strip	212,700	200	truck	212,700	11	4	Vn-184
	Green Pit	Madison	4, 5		surface	strip	6,342	75	truck	6,342	2	1	Vn-182
B & N Coal, Inc.	Shilling Pit	Aurelius	9	36	surface	strip	79,721	258	truck	79,721	6	1	Ne-1008
WASHINGTON COUNTY—Total production = 79,721 tons													

DEC 15 2000
IL GEOL SURVEY

¹⁰Employment includes Bn-3.
¹¹See also Morgan County.
¹²See also Carroll County.
¹³Employment reported for Vn-S is a summary of Vn-S, Vn-S2, and Vn-194 operations in Vinton County.
¹⁴See also Jackson County.
¹⁵See also Meigs County.



Roller operator Jerome Slaughter of The Shelly Company smoothing and compacting recently installed asphalt pavement. The location is immediately east of the I-270 and Sawmill Road interchange in northern Franklin County.

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS

*For those mines that have not been assigned a state mine number, a letter designation is used (example: Ts-A).
If there are no sales or production figures given for an operation, that operation reported no sales or production in 1999.
To convert short tons to metric tons, multiply the given tonnage by 0.907185.*

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
A-1 All Ohio Sand & Gravel Co. 81 Vaughn Rd. Akrón, OH 44319 330-644-0700 Sam Serves, pres.	A-1 All Ohio Sand & Gravel Co. (583)	Summit	sand & gravel			St-50	IM-722
ATS Enterprises P.O. Box 128 Haverhill, OH 45636 606-299-7001 Steve Lawson, plant mgr.	ATS Enterprises (306)	Scioto	sand & gravel	416,832	420,265	So-79	IM-221
Acme Sand & Gravel 128 First St. W Strasburg, OH 44680 330-756-3177 Susan K. Malcuit, pres.	Acme Sand & Gravel (612)	Tuscarawas	sand & gravel			Ts-A	IM-1218
Agg Rok Materials 711 Frank Rd. Columbus, OH 43223 614-875-5500 William G. Heffner, pres.	Agg Rok Materials (94)	Franklin	sand & gravel	610,774	610,545	Fn-36	IM-302
Alan Stone Co., Inc. P.O. Box 127 Chesterhill, OH 43728 740-554-6191 Claudia Staley, pres.	Alan Stone Co., Inc. (51) Marietta Quarry (43)	Belmont Washington	sandstone sandstone	1,100	1,000	Bt-1193 Wn-45	IM-1117 IM-125
William Albert, Inc. 1300 Cassingham Hollow Rd. Coshocton, OH 43812 740-622-3045 William Albert, pres.	William Albert, Inc. (438) (88)	Coshocton	sand & gravel clay	49,799	51,800	Cn-828	IM-1026
Alden Sand & Gravel Co. 2504 Northampton Rd. Cuyahoga Falls, OH 44223 330-928-3249 Joanne Alden, pres.	Alden Sand & Gravel Co. (496)	Summit	sand & gravel	19,749	19,749	St-55	IM-589
Allgeier & Son, Inc. 6386 Bridgetown Rd. Cincinnati, OH 45248 513-574-3735 Earl W. Allgeier, pres.	Pit 2 (467) Pit 1 (521) Nelson Stark Gravel Pit (520)	Hamilton Hamilton Hamilton	sand & gravel sand & gravel sand & gravel	106,000	106,000	Hmn-AS Hmn-AS1 Hmn-C	IM-1106 IM-797 IM-1132
Allied Corp., Inc. 1749 Highland Dr. Twinsburg, OH 44087 330-425-7861 Charles Rauh, pres.	Allied Corp., Inc. (435)	Stark	sand & gravel			Sk-173	IM-879
American Excavating, Inc. P.O. Box 374 Enon, OH 45323 937-882-1372 Robert E. Holland, pres.	American Excavating, Inc. (704)	Clark	sand & gravel	29,800	34,000	Ck-A	IM-1359
American Landfill, Inc. 7916 Chapel St. SE Waynesburg, OH 44688 330-866-3265 David A. Bower, Jr., pres.	American Landfill, Inc. (123) (123)	Stark	clay shale	40,500 665,173	40,500 665,173	Sk-246	IM-1114
American Sand & Gravel, Inc. 8188 Wales Rd. NW North Canton, OH 44720 330-494-6455 Christopher A. Scala, pres.	Plant 1 (387) American Sand & Gravel, Inc. (710) Plant 2 (386) Plant 4 (455)	Portage Portage Stark Stark	sand & gravel sand & gravel sand & gravel sand & gravel	43,655 1,152,103	43,655 1,152,103	Pe-95 Pe-A Sk-203 Sk-243	IM-212 IM-1362 IM-654 IM-908
Apache Aggregate & Paving Co. 46626 County Route 495 Coshocton, OH 43812 740-622-5904 Charlene B. Ross, pres.	Apache Aggregate & Paving Co. (69) Apache Aggregate & Paving Co. (70)	Coshocton Coshocton	sand & gravel sand & gravel	107,205 5,646	154,993 5,646	Cn-718 Cn-783	IM-227 IM-717

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
Ashcraft Sand & Gravel, Inc. 5850 Dry Fork Rd. Cleveland, OH 45002 513-367-5700 Rick Ashcraft, pres.	Ashcraft Sand & Gravel, Inc. (120)	Hamilton	sand & gravel	52,248	52,248	Hmn-54	IM-710
Athens Hocking Reclamation Center 35380 Hocking Dr. P.O. Box 946 Logan, OH 43138 740-385-6019 Edward F. Kilbarger, pres.	Athens Hocking Reclamation Center (81)	Athens	clay	574	574	As-594	
Atlas Towing Co. P.O. Box 1632 Parkersburg, WV 26101 304-428-0341 Christopher V. Criss, pres.	Belpre Bank Run (432)	Washington	sand & gravel	13,917	13,917	Wn-54	IM-383
Ayers Limestone Quarry, Inc. 2000 Colerain Pike P.O. Box 67 Martins Ferry, OH 43935 740-633-2958 Thomas E. Ayers, pres.	Ayers Limestone Quarry, Inc. (12)	Belmont	limestone	132,705	132,705	Bt-716	IM-1
B & L Excavating 4711 CR 1-2 Swanton, OH 43558 419-825-1218 Boyd Rhodes, owner	B & L Pit (654)	Fulton	sand & gravel			Ftn-BL1	IM-1282
B & L Sand Co. 441 Iowa St. Ashland, KY 41101 606-325-8301 Janet R. Griffiths, pres.	B & L Sand Co. (167)	Lawrence	sand & gravel	16,811	16,811	Le-430	IM-844
B & N Coal, Inc. P.O. Box 100 Dexter City, OH 45727 740-783-3575 Carl Baker, Jr., pres.	B & N Coal (179)	Noble	limestone			Ne-B	IM-897
Baker Sand, Inc. 7800 White Rd. Burbank, OH 44214 330-948-1448 John E. Baker, pres.	Baker Sand, Inc. (203) Friendsville Sand, L.P. (558)	Medina Medina	sand & gravel sand & gravel	747,946	747,946	Ma-20 Ma-23	IM-448 IM-1177
Ballentine Excavation Co. 7854 Cooley Rd. Ravenna, OH 44266 330-297-9739 Daniel H. Ballentine, owner	Ballentine Lake (689)	Portage	sand & gravel	1,620	1,620	Pe-BA	IM-1327
Barrett Paving Materials, Inc. P.O. Box 14591 Dayton, OH 45413-0591 937-279-3200 Gerald Bushelman, reg. mgr.	Barrett Paving Materials, Inc. (461) Gregory Stone, Inc. (66) Barrett Paving Materials #139 (177)	Clark Miami Miami	sand & gravel limestone limestone	626,000 359,000	659,000 350,000	Ck-28 Mi-502 Mi-BPM	IM-1100 IM-414 IM-1169
Barrett Paving Materials, Inc. 7374 Main St. Cincinnati, OH 45244 513-271-6200 George Ausseil, pres.	Barrett Paving Materials-Perintown (59)	Clermont	sand & gravel	78,222	259,679	Ct-9	IM-526
Barrett Paving Materials, Inc. 8401 Sylvania Ave. Sylvania, OH 43560 734-483-4775 John Krispin, aggregate mgr.	Sylvania Quarry (160) (225)	Lucas	limestone shale	550,082 8,600	580,000 8,600	Ls-12	IM-953
Bartley & Bolin Excavating 1242 County Rd. 1475 Ashland, OH 44805-9277 419-289-1507 Dale Bartley and Mitchell Bolin, owners	Bartley & Bolin, Inc. Plant #2 (6) Simanton Rd. (509) Bartley & Bolin, Inc. (409)	Ashland Ashland Richland	sand & gravel sand & gravel sand & gravel	166,729 24,777	166,729 24,777	Ald-9 Ald-16 Rd-20	IM-745 IM-1120 IM-617

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
Baycliffs Corp. 15400 Pearl Rd. #201 Strongsville, OH 44136 440-238-1905 Carl Zipfel, pres.	Johnson Island Quarry (198)	Ottawa	limestone			Oa-BC	IM-1288
Bearcreek Clay Co. 11123 State Route 37 East New Lexington, OH 43764 740-342-5473 Tom L. Dennis, owner	Dennis Clay (108) (108)	Perry	clay shale	16,451 32,902	16,451 32,902	Py-338	IM-1092
	Nelson/Butler (205) (205)	Perry	clay shale	20,179 33,846	20,179 33,846	Py-D1	IM-1304
Beaver Excavating, Inc. P.O. Box 6059 Canton, OH 44706 330-478-2151 Mark Sterling, pres.	Gavin Plant Landfill (79) (202)	Gallia	sandstone clay	694,367	694,367	Ga-VFL	IM-1314
	Stone Products (607) (162)	Stark	sand & gravel shale	5,000	5,000	Sk-BE	IM-1202
Beck Sand & Gravel, Inc. 2820 Webb Rd. Ravenna, OH 44266 330-626-3863 Rodney Wenrich, pres.	Beck Sand & Gravel, Inc. (256)	Portage	sand & gravel	215,978	215,978	Pe-50	IM-96
Paul D. Beery Trucking Co. 4770 Cincinnati-Zanesville Rd. NE Lancaster, OH 43130 740-653-5061 Paul D. Beery, pres.	Paul D. Beery Trucking Co. (401)	Fairfield	sand & gravel	3,246	0	Fd-14	IM-933
Belden Brick Co. P.O. Box 20910 Canton, OH 44701 330-852-2424 Robert F. Belden, pres.	Moomaw Pit (187) (62) (56) (56)	Tuscarawas	limestone sandstone clay shale	7,309 54,784 50,477	7,309 54,784 50,477	Ts-1517	IM-46
	Belden Pit (209) (78) (57) (57)	Tuscarawas	limestone sandstone clay shale	9,545 45,216 41,536	9,545 45,216 41,536	Ts-1646	IM-44
	Wallick Pit (71) (58) (58)	Tuscarawas	sandstone clay shale	119,584 16,676	119,584 16,676	Ts-1841	IM-45
	Shanesville Pit (206) (59) (59)	Tuscarawas	limestone clay shale	14,226 36,769 64,407	14,226 36,769 64,407	Ts-1939	IM-47
	Beagle Pit (60)	Tuscarawas	clay			Ts-1960	IM-48
	Plotner Pit (188) (147)	Tuscarawas	limestone clay			Ts-B	IM-49
	Dundee (191) (177)	Tuscarawas	limestone clay			Ts-BB	IM-1221
Belville Mining Co., Inc. P.O. Box 834 Ironton, OH 45638 740-643-2331 Thomas J. Belville, pres.	Belville Mining #1 (159) (93)	Lawrence	limestone clay			Le-B	IM-1188, D-0746
Best Sand Corp. 11830 Ravenna Rd. Chardon, OH 44024 440-285-3132 Charles Fowler, pres.	Best Sand Corp. (17) Best Sand Corp. (45) Best Sand Corp. (34)	Geauga Pike Ross	sandstone sandstone sandstone	770,270 120,897	780,113 109,931	Gea-3 Pke-31 Rs-16	IM-89 IM-835 IM-172
Beverly Slag Co. P.O. Box 599 McConnelsville, OH 43756 740-962-5621 Carl L. Price, v. pres.	Devola Pit (364)	Washington	sand & gravel	1,250	1,250	Wn-55	IM-669
Big T Mining P.O. Box 121 Haverhill, OH 45636 740-532-3951 Brian Hughes, owner	Big T Pit (663)	Scioto	sand & gravel			So-BT	IM-1286
Black Top Contracting, Inc. P.O. Box 426 Nelsonville, OH 45764 Tim Maiden, pres. 740-423-5455	Black Top #1 (19) York Township Trustees (702)	Athens Athens	sand & gravel sand & gravel			As-588 As-BT	IM-630 IM-1350

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
E. E. Blair Construction Co. P.O. Box 309 Wheelersburg, OH 45694-0309 740-574-6575 Edwin E. Blair, pres.	Cab Pit (303)	Scioto	sand & gravel	125,750	125,750	So-98	IM-474
Blue Jay Enterprises of Ts. Co., Inc. P.O. Box 641 Zoar, OH 44697 330-874-2048 Leland Ervin, pres.	Swonger Pit (207) (85) (85) Blue Jay #1 (200) (201) (201)	Tuscarawas Tuscarawas	limestone clay shale limestone clay shale	51 12,039 50 926 11,185 8,321	51 12,039 50 926 11,185 8,321	Ts-520 Ts-BJ	IM-214 IM-1285
Blue Stone Sand & Gravel, Inc. 14376 N. Cheshire St. P.O. Box 567 Burton, OH 44021 440-834-1367 David W. Ronyak, pres.	Blue Stone Pit #1 (673) Blue Stone Pit #2 (674)	Portage Portage	sand & gravel sand & gravel	135,813	137,988	Pe-B1 Pe-B2	IM-1296 IM-1305
Bluffton Stone Co. P.O. Box 26 Bluffton, OH 45817-0026 419-358-6941 Brent C. Gerken, pres.	Bluffton Stone Co. (3)	Allen	limestone	578,032	562,668	An-1	IM-485
Blum Mining Co. P.O. Box 232 Carrollton, OH 44615 330-627-2670 Raymond Blum, pres.	Blum Mining Co. (161) (476)	Mahoning	limestone sand & gravel			Mg-629	IM-1008
Bowerston Shale Co. 1329 Seven Hills Rd. NE Newark, OH 43055 740-763-3921 Mark Williard, pres.	Hanover (31) Fazeysburg (38) (38)	Licking Muskingum	shale clay shale	14,199 5,499	14,199 5,499	Lg-501 Mum-776	IM-257 IM-256
Bowerston Shale Co. 515 Main St. P.O. Box 199 Bowerston, OH 44695 740-269-2921 Mark Williard, pres.	Bowerston (11) Scott Farm (109)	Harrison Harrison	shale shale	36,000	36,000	Hn-152 Hn-B	IM-42 IM-1020
Gaston Bowling, Inc. P.O. Box 330 Oxford, OH 45056 513-523-8805 Gaston Bowling, pres.	Indian Creek Sand & Gravel (37)	Butler	sand & gravel	5,337	5,337	Br-40	IM-493
D. H. Bowman & Sons, Inc. 1201 Mill St. Bellville, OH 44813-1282 419-886-2711 Richard D. Bowman, pres.	D. H. Bowman & Sons, Inc. (287)	Richland	sand & gravel	49,357	54,982	Rd-4	IM-279, IM-1255
Boyas Excavating, Inc. 10055 Sweet Valley Dr. Cleveland, OH 44125-4247 216-447-0175 Pete Boyas, pres.	Valley View Quarry (595) (13)	Cuyahoga	sand & gravel sandstone			Cya-42	IM-686
Boyd Excavating 9553 County Rd. 28 Zanesfield, OH 43360 937-465-3290 Jeff Boyd, pres.	Boyd Excavating (669)	Logan	sand & gravel	9,713	9,713	Lgn-B	IM-1309
Briar Hill Stone Co. P.O. Box 457 Glenmont, OH 44628 330-377-5100 F. L. Waller, pres.	Quarry #26 (4) Quarry #3 (5) Quarry #32 (6) Quarry #24 (7) Quarry #18 (8) Quarry #54 (46) Quarry #55 (44) Quarry #31 (19) Quarry #6 (23)	Coshocton Coshocton Coshocton Coshocton Coshocton Coshocton Coshocton Holmes Knox	sandstone sandstone sandstone sandstone sandstone sandstone sandstone sandstone sandstone	1,917 9,086 401 14,080	1,917 9,086 401 14,080	Cn-13 Cn-659 Cn-686 Cn-692 Cn-695 Cn-809 Cn-815 Hs-49 Kx-12	IM-397 IM-232 IM-504 IM-294 IM-402 IM-909 IM-939 IM-418 IM-445

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
Briggs Sand & Gravel, Inc. Route 4 Box 303 County Rd. 10 Marietta, OH 45750 740-373-3363 James F. Briggs, pres.	Briggs Sand & Gravel, Inc. (365)	Washington	sand & gravel	7,695	7,695	Wn-508	IM-57
Broadway Sand & Gravel, Inc. 2000 Sandridge Dr. Dayton, OH 45439 937-299-1166 George D. Jones, v. pres.	Broadway Sand & Gravel, Inc. (225)	Montgomery	sand & gravel			My-65	IM-594
Broshear Contractors, Inc. 2520 Millville-Ross Rd. Hamilton, OH 45013 513-863-3388 Gerald Broshear, pres.	Ross Twp. Gravel (31)	Butler	sand & gravel	250	250	Br-48	IM-562
Gary L. Brown 900 W. South Boundary St., Bldg. #10 Perrysburg, OH 43551 419-872-4202 Gary L. Brown, pres.	Gary L. Brown (682)	Lucas	sand & gravel	242	242	Ls-GB	IM-1323
Browning-Ferris Industries of Ohio, Inc. 530 North Camp Rd. Port Clinton, OH 43452 419-635-2367 David Vossmer, gen. mgr.	Ottawa County Landfill (198)	Ottawa	clay	227,102	227,102	Oa-BF	IM-1287
Karl Brugmann Sand & Gravel, Inc. 8420 Weaver Rd. Ravenna, OH 44266 330-626-3914 Donald H. Brugmann, owner	Karl Brugmann Sand & Gravel, Inc. (257)	Portage	sand & gravel	61,562	61,562	Pe-15	IM-104
Oscar Brugmann Sand & Gravel, Inc. 3828 Dudley Rd. Mantua, OH 44255 330-274-8224 Roy Brugmann, pres.	Oscar Brugmann Sand & Gravel, Inc. (258) (70)	Portage	sand & gravel sandstone	537,496	585,000	Pe-9	IM-119
	Oscar Brugmann Sand & Gravel, Inc. (628)	Portage	sand & gravel			Pe-OB	IM-1241
Brush Wellman, Inc. 14710 W. Portage River South Rd. Elmore, OH 43416-9502 419-862-2745 John Cayton, envirn. engineer	Brush Wellman Clay Mine (136)	Ottawa	clay			Oa-19	IM-1153
Buckeye Excavating Development, Inc. P.O. Box 102 Orrville, OH 44667 330-682-0730 Steven R. Steiner, partner	Steven Steiner (535)	Wayne	sand & gravel	25,909	25,909	We-23	IM-1136
Buckeye Industrial Mining Co. P.O. Box 389 Lisbon, OH 44432 330-337-9511 John C. Grisham, pres.	West Point (178)	Columbiana	clay			Ca-987	D-0928
	West Point Clay (192) (186) (186)	Columbiana	limestone clay shale	51,490	51,490	Ca-BIM	IM-1271
	Cable Job (146) (146)	Stark	clay shale			Sk-247	D-0929
	Close (200) (200)	Stark	clay shale			Sk-B	D-1123
	Robertsville (189) (189)	Stark	clay shale			Sk-BI	D-1043
	Anthony (222)	Stark	clay			Sk-BIM	IM-1361
James Bunnell, Inc. 5730 State Route 128 Cleves, OH 45002 513-353-1100 Jack Ernst, pres.	James Bunnell, Inc. (123)	Hamilton	sand & gravel	1,815	1,815	Hmn-50	IM-205
	James Bunnell, Inc. (124)	Hamilton	sand & gravel	714,964	714,964	Hmn-59	IM-812, IM-815
	James Bunnell, Inc. (519)	Hamilton	sand & gravel	287,088	287,088	Hmn-B	IM-1139
Burlington Sand & Gravel Co. P.O. Box 399 Chesapeake, OH 45619 740-894-5978 Vernon E. Collier, owner	Burlington Sand & Gravel Co. (170)	Lawrence	sand & gravel			Le-426	IM-856

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
The Terry Byrne Mining Co. 4775 Mill Run Rd. Lexington, OH 44904 419-886-4345 Terrance K. Byrne, owner	The Terry Byrne Mining Co. (699)	Richland	sand & gravel			Rd-TB	IM-1343
C & S Contractors, Inc. P.O. Box 42459 Cincinnati, OH 45242 513-530-9844 Raymond A. Conn, pres.	C & S Contractors, Inc. (356)	Warren	sand & gravel			Wan-47	IM-846
C.I.R., Inc. 2856 N. County Line Rd. Geneva, OH 44041-9604 440-352-2256 Louis W. Pirc, pres.	Harmon (625)	Lake	sand & gravel			Lke-CIR	IM-1243
Cargill Incorporated P.O. Box 6920 Cleveland, OH 44101 216-651-7200 Charles Sullivan, pres.	Cleveland Mine (1) Cargill Incorporated (4)	Cuyahoga Summit	salt salt	2,380,862 291,000	2,462,231 296,000	Cya-30 St-9127	
Joe E. Carter 21399 State Line Rd. Lawrenceburg, IN 47025 812-537-3970 Joe E. Carter, owner	Lost Bridge (642)	Hamilton	sand & gravel	400	400	Hmn-JC	IM-1267
Carter & Carter, Inc. P.O. Box 266 Miamisburg, OH 45343-0266 937-859-1036 Charles V. Carter, pres.	Carter & Carter, Inc. (561) (157)	Montgomery	sand & gravel clay	2,714	3,300	My-CW	IM-878
Cashen, Inc. 1225 Dock Rd. Madison, OH 44057 440-428-1148 Andrew Cashen, owner	Sun Valley Cashen Pit (597)	Lake	sand & gravel			Lke-C	IM-1215
Cedar Heights Clay Co. P.O. Box 295 Oak Hill, OH 45656-0295 740-682-7794 William T. Brown, pres.	Sadler (145) Harrison (195)	Jackson Jackson	clay clay	46,161	46,161	Jkn-CH1 Jkn-CH2	IM-1182 IM-1302
Celotex Corp. P.O. Box 280 Port Clinton, OH 43452 419-734-3153 Charles Johnson, plant mgr.	American #2 (1)	Ottawa	gypsum	294,757	294,757	Oa-2	IM-344
Center West Enterprise, Inc. 1544 N. Main St. Niles, OH 44446 330-544-0890 Andrew Basil Polivka, pres.	Center West Enterprise, Inc. (611)	Trumbull	sand & gravel			Tl-C	IM-1190
Central-Allied Enterprises, Inc. P.O. Box 80449 Canton, OH 44708-0449 330-477-6751 Gerald S. Orn, pres.	Massillon Washed Gravel Div. (325) Canton Aggregate Div. (318) Canton Aggregate Div. (319) Central Aggregate Div. (631) Massillon Washed Gravel Div. (578)	Stark Stark Stark Stark Stark	sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel	4,500 675,338 675,338 265,836 342,865	4,500 675,338 675,338 265,836 342,865	Sk-607 Sk-681 Sk-689 Sk-CA Sk-MW	IM-102 IM-164 IM-173 IM-1234 IM-1171
Central Ohio Coal Co. P.O. Box 98 Cumberland, OH 43732-0098 740-962-2013 Charles A. Ebetino, Jr., pres.	Horse Run Stone Quarry (73)	Morgan	limestone			Mon-600	D-1034
Charlestown Sand & Gravel, Inc. 7845 State Route 5 Ravenna, OH 44266 330-296-9233 Yale Stuble, pres.	Charlestown Sand & Gravel, Inc. (259)	Portage	sand & gravel			Pe-17	IM-123
Chesterhill Stone Co. 773 East State Route 60 NE P.O. Box 599 McConnelsville, OH 43756 740-962-5621 Carl L. Price, pres.	Buck Farm (240) East Fultonham (75) Willow Island (675)	Morgan Muskingum Washington	sand & gravel limestone sand & gravel	354,125 848,545 12,681	350,908 840,240 13,546	Mon-588 Mum-106 Wn-C	IM-35 IM-297 IM-1315

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
Chesterville Sand & Gravel Co., Inc. State Route 95 E P.O. Box 51 Chesterville, OH 43317 419-768-3369 Carrol D. Gleason, pres.	Chesterville Sand & Gravel Co., Inc. (242)	Morrow	sand & gravel	176,471	176,471	Mw-10	IM-258
Christman Quarry 47278 Swazey Rd. Lewisville, OH 43754 740-838-2475 Gerald L. Christman, owner	Christman Quarry (163)	Monroe	limestone	78,933	78,933	Me-C	IM-1088
Clark Clay Inc. 6878 Township Rd. 310 Millersburg, OH 44654 330-674-2225 Dennis S. Clark, owner	Clark Clay Inc. (17)	Holmes	clay			Hs-56	
Clemson Excavating, Inc. 9954 Old State Rd. Chardon, OH 44024 440-286-4757 Bill Clemson, pres.	Clemson (635)	Ashtabula	sand & gravel	67,723	67,723	Asa-C	IM-1278
Cleveland Quarries P.O. Box 261 Amherst, OH 44001-0261 440-986-4501 James Rallo, pres.	Birmingham Quarry (14) Amherst Quarries (27)	Erie Lorain	sandstone sandstone	5,860	13,369	Ee-21 Ln-3	IM-416 IM-415
Clinton Stone, Inc. P.O. Box 650 Hamden, OH 45634-0650 740-384-4211 Bonny Huffman, pres.	Sands Hill (124)	Vinton	limestone			Vn-174	D-0309
M. J. Coates Construction Co. P.O. Box 41231 Dayton, OH 45441 937-433-1581 Martin J. Coates, owner	M. J. Coates Construction Co. (548) M. J. Coates Construction Co. (550)	Greene Greene	sand & gravel sand & gravel	91,207 62,420	91,207 62,420	Ge-47 Ge-G	IM-751 IM-655
Cochran Transportation Services, Inc. P.O. Box 578 Athens, OH 45701 740-593-3906 Charles W. Cochran, pres.	Circle Hill Sand & Gravel, Inc. (458) (87)	Athens	sand & gravel clay	28,690	36,690	As-595	IM-1083
Boone Coleman Construction, Inc. Route 5 Box 292 West Portsmouth, OH 45662 740-858-6661 Boone Coleman, pres.	Coleman Pit (576) Boone Coleman Construction (73)	Scioto Scioto	sand & gravel sandstone	1,032	1,532	So-B So-BC	IM-705 IM-1252
Bill D. Colwell P.O. Box 261 Somerville, OH 45064 513-726-6800 Bill D. Colwell, owner	Bill D. Colwell (28)	Butler	sand & gravel	41,198	41,198	Br-36	IM-649
Complete Resources Co. 1275 E. Fifth Ave. Columbus, OH 43219 614-253-6415 Fred Lawson, pres.	Darby Materials Plant #5 (648)	Pickaway	sand & gravel	251,546	197,652	Fn-C	IM-1265
Con-Ag, Inc. 16672 County Rd. 66A North St. Marys, OH 45885 419-394-8870 Robert E. Hirschfeld, pres.	Con-Ag, Inc. (10)	Auglaize	limestone	263,675	294,501	Ae-31	IM-744
Countryside Waste Services, Inc. 6141 Depweg Rd. Celina, OH 45822 419-925-4592 Brad L. Green, gen. mgr.	Countryside Waste Services, Inc. (209)	Mercer	clay	68,500	68,500	Mr-C	IM-1341

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
County Disposal (Ohio), Inc., dba County Environmental of Wyandot 11164 CR 4 Carey, OH 43316 419-396-3581 Jim Van Weelden, pres.	County Environmental of Wyandot (224)	Wyandot	clay	170,669	170,669	Wt-CD	IM-2016
County Line Concrete & Supply Co. P.O. Box 176 Gnaddenhutzen, OH 44629 740-254-4635 W. E. Stocker, chairman	County Line Concrete & Supply Co. (668)	Coshocton	sand & gravel	109,264	0	Cn-C	IM-1311
Donald A. Coy 3112 Clark Mill Rd. Norton, OH 44203 330-753-5000 Donald A. Coy, owner	Donald A. Coy (686)	Summit	sand & gravel	9,900	9,900	St-DC	IM-1346
Craigton Shale Co. P.O. Box 6 Lakeville, OH 44638 330-496-3000 Lenny Schemrich, pres.	Lakeville Sand & Gravel (670) Craigton Shale (165)	Holmes Wayne	sand & gravel shale	90,972	90,972	Hs-C We-25	IM-1303 IM-1209
Cremeans Concrete & Supply Co., Inc. Georges Creek Rd. P.O. Box 475 Gallipolis, OH 45631 740-446-1142 Frank A. Cremeans, pres.	Cremeans Concrete & Supply Co., Inc. (440)	Gallia	sand & gravel			Ga-626	IM-1046
Crosby Gravel 9570 State Route 128 Harrison, OH 45030 513-738-0077 Donald Smith, pres.	Crosby Gravel (121)	Hamilton	sand & gravel	54,225	54,225	Hmn-44	IM-120
R. A. Cruise Sand & Gravel, Inc. P.O. Box 1066 Ravenna, OH 44266 330-296-4087 Larry A. Cruise, pres.	R. A. Cruise Sand & Gravel, Inc. (261)	Portage	sand & gravel	46,401	46,401	Pe-45	IM-139
Cunningham Asphalt Paving, Inc. P.O. Box 370 Wheelersburg, OH 45694 740-574-6184 Karl Cunningham, pres.	Cunningham Pit (304)	Scioto	sand & gravel			So-83	IM-211
Custar Stone Co. P.O. Box 629 Napoleon, OH 43545 419-533-8831 Brent Gerken, pres.	Custar Stone Co. (129)	Wood	limestone	373,616	378,856	Wd-5	IM-473
D. & D. Mining Co. 3379 E. Garfield Rd. New Springfield, OH 44443 330-549-3127 Donald Thompson, pres.	D. & D. Strip (130) (130) D. & D. Mining (57) (164)	Columbiana Columbiana	clay shale sandstone clay	13,958	13,958	Ca-348 Ca-888	IM-976 IM-1181
D & K Materials, Inc. 3141 Congress Lake Rd. Mogadore, OH 44260 330-678-2411 Kimberly Ebie, pres.	D & K Materials, Inc. (568) (199)	Portage	sand & gravel clay	23,944	23,944	Pe-101	IM-1154
D & W Sand & Gravel 10677 Wren Rd. Mechanicsburg, OH 43044 937-834-2548 Dale Potter, owner	D & W Sand & Gravel (49)	Champaign	sand & gravel	7,143	7,143	Cpn-21	IM-616
D.B.M. Materials, LLC 2040 Alum Creek Dr. Columbus, OH 43207 614-445-8421 John B. Igel, pres.	D.B.M. Materials, LLC (97)	Franklin	sand & gravel	63,645	70,540	Fn-14	IM-832

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
D.G.M., Inc. 453 Salisbury Rd. Beaver, OH 45613 740-820-3145 Thomas Salisbury, pres.	Tow Path Ready Mix (664)	Scioto	sand & gravel	2,432	2,432	So-DGM	IM-1280
Darby Creek Excavating 6790 Brooksmiller Rd. Circleville, OH 43113 740-477-8600 Kevin R. Steward, pres.	Darby Creek Excavating (671)	Pickaway	sand & gravel	9,000	9,000	Pky-DC	IM-1316
Davon, Inc. 4281 Roush Rd. Hillsboro, OH 45133 937-364-2311 John B. Patton, pres.	Plum Run Stone (1) Eagle Crushed Stone (184) Highland Stone (41) Chattin Pit (253) Piketon Sand & Gravel (255) Scioto Valley Resources (395)	Adams Brown Highland Pike Pike Scioto	limestone limestone limestone sand & gravel sand & gravel sand & gravel	1,977,300 701,607 1,080,645 598,824 220,886	1,991,818 770,034 1,094,298 565,124 263,125	Ads-1 Bn-EC Hd-2 Pke-23 Pke-24 So-100	IM-237 IM-1195 IM-230 IM-242 IM-222 IM-950
De Milta Sand & Gravel, Inc. 921 Erie Rd. Eastlake, OH 44095 440-942-2015 Nick De Milta, pres.	De Milta Sand & Gravel, Inc. (598)	Lake	sand & gravel			Lke-D	IM-1187
Demmy Construction, Inc. 4324 Fairfield Pike Springfield, OH 45502 937-323-4079 Daniel E. Demmy, pres.	Demmy Construction, Inc. (216) (385)	Clark	limestone sand & gravel	16,429 19,680	16,429 19,680	Ck-501	IM-340
Demmy Sand & Gravel 4324 Fairfield Pike Springfield, OH 45502 937-325-8840 Woodrow Demmy, owner	Demmy Sand & Gravel (54)	Clark	sand & gravel	5,671	5,671	Ck-502	IM-375
A. J. Diana Sons, Inc. 1916 Erie Ave. NW P.O. Box 488 Massillon, OH 44648 330-832-5904 Virgil V. Diana, pres.	Neidert Pit (320)	Stark	sand & gravel			Sk-694	IM-858
Dingledine Basic Materials, Inc. 2304 Somerville Rd. P.O. Box 86 Somerville, OH 45064 513-726-5258 Gerald Dingledine, owner	Dingledine Basic Materials, Inc. (32)	Butler	sand & gravel	83,883	83,883	Br-50	IM-739
Dome Minerals, Inc. 15601 Emerick Rd. Kensington, OH 44427 330-223-1413 Fred A. Rogers, pres.	Dome Minerals, Inc. (79)	Columbiana	shale	24,500	24,500	Ca-947	IM-935
Don's Dozer Service, Inc. 8200 Seasons Rd. Streetsboro, OH 44241 330-626-5147 Donald R. McElravy, pres.	Don's Dozer Service, Inc. (529)	Portage	sand & gravel	3,557	3,557	Pe-96	IM-792
James E. Downard 1185 Zwingli Rd. Bremen, OH 43107 740-569-7849 James E. Downard, owner	Downard Pit (541) (155)	Fairfield	sand & gravel clay	3,205 1,665	3,205 1,665	Fd-16	IM-1156
C. E. Duff & Son, Inc. 9042 State Route 117 P.O. Box 305 Huntsville, OH 43324-0305 937-686-2488 James E. Duff, pres.	C. E. Duff & Son, Inc. (156) C. E. Duff & Son, Inc. (444) C. E. Duff & Son, Inc. (50) Duff Sand Co. (182) C. E. Duff & Son, Inc. (420) C. E. Duff & Son, Inc. (183)	Hardin Logan Logan Logan Logan Logan	limestone sand & gravel limestone sand & gravel sand & gravel sand & gravel	23,479 364,660 7,368 2,055 1,701	23,479 364,660 7,368 2,055 1,701	Hdn-S Lgn-12 Lgn-15 Lgn-31 Lgn-36 Lgn-39	IM-1034 IM-1071 IM-453 IM-454 IM-1007 IM-887
E. A. Construction, Inc. 7013 S. Funk Rd. Shreve, OH 44676 330-496-2531 Ellis Aylesworth, pres.	#1 (613) #1 (74) (185)	Wayne Wayne	sand & gravel sandstone clay	1,213 27,400 6,590	1,213 27,400 6,590	We-24 We-EA	IM-1211 IM-1259

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Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
ENZ, Inc. P.O. Box 405 Magnolia, OH 44643 330-866-4510 James R. Demuth, pres.	Sickafoose-Fox Pit (205) (203) (203)	Stark	limestone clay shale	190,659	190,659	Sk-208	D-1015, D-1144
ESSROC Cement Corp. P.O. Box 779 Bessemer, PA 16112 724-667-7702 Robert Rayner, pres.	Bessemer Pit (57) (34) Carbon Pit (162) (107) (107)	Mahoning Mahoning	limestone clay limestone clay shale	6,120 9,656 794,673 4,120 67,131	6,120 9,656 794,673 4,120 67,131	Mg-608 Mg-EM	IM-4 IM-1056
Eagle Material 1400 Tharp Rd. Alexandria, OH 43001 740-924-1066 Rock Van Wey, pres.	Eagle Material Supply (600)	Licking	sand & gravel	248,568	248,568	Lg-W	IM-1213
East Fairfield Coal Co. 10900 South Ave. P.O. Box 217 North Lima, OH 44452 330-549-2165 W. Thomas Mackall, pres.	Withers-Petersburg (171) (602) (53) (118)	Mahoning	limestone sand & gravel sandstone clay	929,110 2,999	929,110 2,999	Mg-631	IM-1103
Eaton Sand & Gravel Co. 11641 Mosteller Rd. Cincinnati, OH 45241 513-771-0820 James P. Jurgensen, pres.	Cleves Gravel Pit (132)	Hamilton	sand & gravel			Hmn-46	IM-396
David E. Edgington P.O. Box 282 Frankfort, OH 45628 740-998-5328 David E. Edgington, owner	Edgington Pit (573)	Ross	sand & gravel	2,226	2,226	Rs-E	IM-1168
Embro, Inc. 8320 North State Route 123 Franklin, OH 45005 513-746-6121 Ronald Martz, pres.	Embro, Inc. (589)	Warren	sand & gravel	76,537	76,537	Wan-7	IM-151
Enon Washed Sand & Gravel Co. 1665 Enon Rd. P.O. Box 363 Enon, OH 45323 513-651-5000 John Steele, Jr., pres.	Enon Washed Sand & Gravel Co. (57)	Clark	sand & gravel	284,103	303,841	Ck-3	IM-463
Erie Blacktop, Inc. 4507 Tiffin Ave. P.O. Box 2308 Sandusky, OH 44870 419-625-7374 Dean Wikel, pres.	Erie Blacktop Quarry (24) (637) Erie Blacktop, Inc. (417)	Erie Huron	limestone sand & gravel sand & gravel	168,411 6,406	168,411 0	Ee-27 Hrn-16	IM-608 IM-975
Erie Materials, Inc. 4507 Tiffin Ave. Sandusky, OH 44870 419-625-7374 Dean Wikel, pres.	Borchardt (83)	Erie	sand & gravel			Ee-18	IM-676
Erie Sand & Gravel Co. P.O. Box 179 Erie, PA 16512-0179 814-453-6721 Sidney E. Smith, Jr., pres.	Erie Sand & Gravel Co. (1)	Lake Erie	sand & gravel	7,695	7,695	Ee-dredge	
Feikert Sand & Gravel, Inc. 6971 County Rd. 189 Millersburg, OH 44654 330-674-0038 Lynn O. Feikert, pres.	Feikert Sand & Gravel, Inc. (154)	Holmes	sand & gravel	114,038	114,038	Hs-511	IM-1048, IM-1240
Fenner Sand & Gravel, Inc. 7131 W. Fenner Rd. Ludlow Falls, OH 45339 937-698-7048 Robert P. Snead, pres.	Woodville Concrete Corp. (222)	Miami	sand & gravel	104,000	104,000	Mi-4	IM-472

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
Fleming Construction Co., Inc. P.O. Box 31 Marion, OH 43301-0031 740-494-2177 Gerald E. Fleming, pres.	Pit #1 (197) Pit #2 (423)	Marion Marion	sand & gravel sand & gravel	6,849 19,270	6,849 19,270	Mn-16 Mn-19	IM-171 IM-990
Flesher Sand & Gravel, Inc. 3322 Clark Mill Rd. Norton, OH 44203 330-745-9239 James E. Fisher, pres.	McCoy Pit (327)	Summit	sand & gravel			St-52	IM-900
David L. Florence Route 4, Box 88 Marietta, OH 45750 740-374-6008 Joan D. Florence, owner	Florence Pit (80) (163)	Washington	sandstone clay	9,582	9,582	Wn-F	IM-1208
Foureman's Sand & Gravel, Inc. 2791 Wildcat Rd. Greenville, OH 45331 937-548-1718 Gary B. Foureman, pres.	Foureman's Sand & Gravel, Inc. (80)	Darke	sand & gravel	70,545	70,545	Dke-4	IM-433
Fox Stone Products, Inc. P.O. Box 299 Put-In-Bay, OH 43456 419-285-3025 Richard H. Fox, owner	Fox Stone Products (180)	Ottawa	limestone			Oa-18	IM-635
Lloyd B. Fry P.O. Box 1515 Piqua, OH 45356 937-773-1940 Lloyd B. Fry, pres.	Lloyd B. Fry (390)	Miami	sand & gravel			Mi-T	IM-696
Frye Sand & Gravel, Inc. 3049 S. Denmark Rd. P.O. Box 3 Dorset, OH 44032-0003 440-858-2627 Harold L. Frye, owner	Frye Sand & Gravel, Inc. (9) Frye Sand & Gravel, Inc. (650)	Ashtabula Ashtabula	sand & gravel sand & gravel	2,304 737	2,304 737	Asa-10 Asa-F	IM-198 IM-1289
GANS Ltd. 800 West Maple St. Hartville, OH 44632 330-877-2525 Ellis Erb, pres.	Brimfield Sand & Soils (605)	Portage	sand & gravel	6,658	8,500	Pe-102	IM-1184
Ganges Gravel Co. P.O. Box 638 Mansfield, OH 44901 419-896-3660 Don Daugherty, pres.	Ganges Gravel Co. (289)	Richland	sand & gravel	16,164	16,164	Rd-18	IM-670
John L. Garber Materials, Inc. Route 8 Lexington, OH 44904 419-884-1567 John L. Garber, pres.	John L. Garber Materials, Inc. (290)	Richland	sand & gravel	230,368	233,000	Rd-14	IM-436
General Clay Products Corp. 1445 W. Goodale Blvd Columbus, OH 43212 614-486-0614 Harold B. Epler, Jr., pres.	Drescher Pit (6) (6) General Clay-Diamond Pit (110) (110) General Clay Products Pit #5 (37) (37) Plant #7 (73)	Coshocton Hocking Medina Wyandot	clay shale clay shale clay shale clay	23,738	23,738	Cn-787 Hg-330 Ma-6 Wt-7	IM-610 IM-1013 IM-455 IM-407
General Motors Power Train 26427 State Route 281 East Defiance, OH 43512 419-782-7010 Michael Hamilton, pres.	GMPT-clay borrow area (217)	Defiance	clay	135,00	135,000	De-3	IM-1351
GenLime Inc. P.O. Box 158 Genoa, OH 43430 419-855-8336 Pierre Poulin, pres.	GenLime Inc. (85)	Ottawa	limestone	1,082,208	1,217,429	Oa-1	IM-292

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
Glen-Gery Corp. P.O. Box 398 Caledonia, OH 43314 419-845-3321 Steve Matsick, pres.	Iberia Quarry (36)	Marion	shale	208,947	208,947	Mn-7	IM-309
Golden Crescent Construction, Inc. 1104 Milan Ave. Amherst, OH 44001 440-967-6822 Samuel T. Bartlett, pres.	Golden Crescent Construction, Inc. (66)	Lorain	sandstone			Ln-14	IM-1205
Golsch Construction, Inc. 9880 Valley Junction Rd. Cleveland, OH 45002 513-353-2555 Gary Golsch, pres.	Golsch (641)	Hamilton	sand & gravel	10,000	10,000	Hmn-G	IM-1270
Joyce A. Good 1203 Kieffer St. Wooster, OH 44691 330-264-6803 Joyce A. Good, owner	Joyce A. Good (508)	Ashland	sand & gravel	2,581	2,581	Ald-G	IM-1121
Good Builders, Inc. 35222 Hocking Dr. Logan, OH 43138 740-385-5872 Steve Good, owner	Good Builders, Inc. (596) (171)	Hocking	sand & gravel clay			Hg-G	IM-1201
Goshen Sand & Gravel 1012 Commercial Ave. SE New Philadelphia, OH 44663 330-339-3339 Ben Cookson, Jr., pres.	Benco Leasing dba Goshen Sand & Gravel (389)	Tuscarawas	sand & gravel	41,891	41,891	Ts-1976	IM-942, IM-1235
Gotttron Bros. Co. 100 South Stone St. Fremont, OH 43420 419-332-6363 Thomas R. Gotttron, pres.	Gotttron Bros. Co. (101)	Sandusky	limestone	83,500	82,800	Sy-5	IM-259
Gray Road Fill, Inc. 325 Clark Rd. Cincinnati, OH 45215 513-761-4980 Roy B. Schweitzer, pres.	Gray Road Fill, Inc. (211)	Hamilton	limestone			Hmn-GR	IM-1363
Green Oaks Potting Products, Inc. 2222 Lake Rockwell Rd. P.O. Box 979 Ravenna, OH 44266 330-296-2157 John Lyon, pres.	Green Oaks (451) (161) (7)	Portage	sand & gravel clay peat	38 5 152	38 5 152	Pe-89	IM-1142
H. T. Griffin Excavating, Inc. 3950 S. Berkey Southern Rd. Swanton, OH 43558 419-826-0230 Henry T. Griffin, owner	H. T. Griffin Excavating, Inc. (472)	Lucas	sand & gravel			Ls-G	IM-1090
Grimes Excavating Route 3 Box 121 New Matamoras, OH 45767 740-865-3990 Lewis Grimes, owner	Grimes Sand & Gravel (533)	Washington	sand & gravel	184,466	184,466	Wn-1008	IM-1111
Gwin Contracting Co. P.O. Box 205 Columbiana, OH 44408 330-482-2092 Lyle D. Gwin, pres.	Gwin Contracting Co. (30)	Mahoning	sandstone			Mg-62	IM-599
J. M. Hamilton & Sons Co., Inc. 1974 Marion-Bucyrus Rd. Marion, OH 43302 740-382-2189 O. E. & A. M. Hamilton, owners	J. M. Hamilton & Sons Co., Inc. (59)	Marion	limestone	98,836	98,836	Mn-2	IM-423

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
Hanson 8130 Brint Rd. P.O. Box 278 Sylvania, OH 43560-0278 419-882-0123 John B. Lawson, pres.	Waterville Quarry (52) Sylvania (Silica) (53) Hanson Paulding Plant (86) Hanson Flat Rock Quarry (107) Hanson Bloomville Quarry (108)	Lucas Lucas Paulding Seneca Seneca	limestone limestone limestone limestone limestone	449,192 990,412 273,447 1,651,378 385,413	446,047 1,112,652 273,447 1,687,629 481,220	Ls-1 Ls-3 Pg-7 Sa-1 Sa-3	IM-575 IM-580 IM-347 IM-349
Harden Agricultural Lime & Reclam. Svs., Inc. 13865 Nickel Plate Rd. Logan, OH 43138 740-385-5296 Scott R. Harden, pres.	Harden Sand & Gravel (679)	Hocking	sand & gravel			Hg-HA	IM-1320
Hardin Quarry Co., Inc. 12484 State Route 701 Kenton, OH 43326 419-675-1327 Richard W. Pees, pres.	Hardin Quarry (38)	Hardin	limestone	286,543	286,543	Hdn-2	IM-443
Norman Harpster 16069 State Route 235 Belle Center, OH 43310 937-464-5623 Norman Harpster, owner	Harpster Pit (553)	Hardin	sand & gravel			Hdn-H	IM-864
Harrison Sand & Gravel Co. 10980 Campbell Rd. Harrison, OH 45030 513-367-5174 Donald Gauck, v. pres.	Harrison Sand & Gravel Co. (135)	Hamilton	sand & gravel	57,922	50,296	Hmn-17	IM-295
Haubeil & Sons Asphalt & Materials, Inc. 379 Seney Rd. Chillicothe, OH 45601 740-773-6358 George Haubeil, pres.	Haubeil & Sons Asphalt & Materials, Inc. (491)	Ross	sand & gravel	137,765	137,765	Rs-H	IM-1052
Haueter Sand & Gravel, Inc. P.O. Box 206 Chardon, OH 44024 440-286-9482 Donald H. Haueter, pres.	Haueter Sand & Gravel, Inc. (108) Haueter Sand & Gravel, Inc. (545)	Geauga Geauga	sand & gravel sand & gravel	153,740 153,740	153,740 153,740	Gea-29 Gea-H	IM-215 IM-510
Heer Excavating, Inc. 7381 State Route 66 Archbold, OH 43502 419-445-1916 Daniel E. Heer, pres.	Mason Pit (634)	Williams	sand & gravel	35,926	35,926	Ws-22	IM-1222
Heiser Sand & Gravel Corp. 4833 Wayview St. NW North Canton, OH 44720 330-499-8201 Richard L. Heiser, pres.	Heiser Sand & Gravel Corp. (608) Heiser Sand & Gravel Corp. (609)	Stark Stark	sand & gravel sand & gravel	30,064 30,064	30,064 30,064	Sk-HS Sk-HS1	IM-1193 IM-1203
Hillsdale Sand & Gravel, Inc. P.O. Box 223 Archbold, OH 43502 419-445-1015 Dean Miller, pres.	Hillsdale Sand & Gravel, Inc. (82)	Defiance	sand & gravel			De-2	IM-765
Hilltop Aggregate, Inc. P.O. Box 362 Mogadore, OH 44260 330-628-4000 Robert W. West, pres.	Hilltop Aggregate, Inc. (262)	Portage	sand & gravel	345,799	345,799	Pe-56	IM-127
Hilltop Basic Resources, Inc. One West Fourth St., Suite 1100 Cincinnati, OH 45202-3615 513-651-5000 John Steele, Jr., pres.	Fairborn Aggregate Plant (112) West Carrollton Aggregate Plant (232)	Greene Montgomery	sand & gravel sand & gravel	610,643 866,817	583,510 658,241	Ge-4 My-19	IM-394 IM-401, IM-916
Hocking Valley Concrete, Inc. 35255 Hocking Dr. Logan, OH 43138 740-385-2165 Mark Vaughn, pres.	Hocking Valley Concrete, Inc. (151)	Hocking	sand & gravel	70,437	87,000	Hg-262	IM-41

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
Hocking Valley Mulch 32091 Beech Camp Rd. Logan, OH 43138 740-385-6744 David E. Sheets, Jr., pres.	Sheets Pit (657)	Hocking	sand & gravel	3,486	3,486	Hg-HV	IM-1284
William A. Hoffman, Jr. 25043 State Route 104 Circleville, OH 43113 740-474-2002 William A. Hoffman, Jr., owner	Hoffman Pit (480)	Pickaway	sand & gravel	3,072	3,072	Pky-H	IM-1039
Hollinger Excavating 2097 Hollansburg-Arcanum Rd. New Madison, OH 45346 937-996-5381 Tom W. Hollinger, leasee	Hollinger Gravel (81)	Darke	sand & gravel			Dke-10	IM-326
Holmes Limestone Co. P.O. Box 295 Berlin, OH 44610 330-893-2721 Merle Mullet, pres.	241 Plant (44) (19) (19) Bolivar Mine (76) L&M Rainsburg (151)	Holmes Stark Tuscarawas	limestone clay shale clay shale	3,543 2,400 59,275 42,181	3,543 2,400 59,275 42,181	Hs-67 Sk-235 Ts-H1	IM-3, IM-768 IM-945 IM-927
Honey Creek Stone Co. P.O. Box 286 Petersburg, OH 44454 724-654-5537 Carmen W. Shick, pres.	Honey Creek Stone Co. (56) (208)	Mahoning	limestone clay	315,286	373,524	Mg-54	IM-93
Hugo Sand Co. 7055 State Route 43 Kent, OH 44240 216-587-2700 Dorothy M. Strohm, pres.	Hugo Sand (264)	Portage	sand & gravel	261,732	261,732	Pe-10	IM-138
Hunter Land Development 3672 CR 6-1 Delta, OH 43515 419-822-3744 Glenn Hunter, pres.	Hunter Land Development (690)	Fulton	sand & gravel			Ftn-H	IM-1336
Hydraulic Press Brick Co. 8900 Hemlock Rd. P.O. Box 31330 Independence, OH 44131 314-621-9306 Steven Rowe, pres.	Hydraulic Press Brick Co. (7)	Cuyahoga	shale	322,624	322,624	Cya-19	IM-95
Inland South Aggregates 51778 Darlington Rd. Negley, OH 44441 330-426-6733 Dave Sugar, pres.	Inland South Aggregates (539)	Columbiana	sand & gravel	141,470	141,470	Ca-351	IM-634
JBM Ltd. 764 State Route 416 SE New Philadelphia, OH 44663 330-339-4313 William P. Marino, Jr., pres.	State Rte. 416 S&G (500)	Tuscarawas	sand & gravel	179,433	179,433	Ts-2018	IM-1076
JP Sand & Gravel Co. 5911 Lockbourne Rd. P.O. Box 2 Lockbourne, OH 43137 614-497-0083 Richard A. Roberts, pres.	JP Sand & Gravel Co. (98)	Franklin	sand & gravel	414,966	414,966	Fn-52	IM-191
James Sand and Gravel 3930 Boggs Rd. Zanesville, OH 43701 740-454-1522 Dan James, pres.	James Sand and Gravel (248)	Muskingum				Mum-216	IM-689 ¹
Janson's Soil Service, Inc. 1492 Mechanicsville Rd. Rock Creek, OH 44084 440-466-3835 Peter E. Janson III, pres.	Janson's Soil Service, Inc. (10) (82) (82)	Ashtabula	sand & gravel clay shale			Asa-14	IM-563

¹This mine was operated January through August 1999 by Salt Creek Materials, Inc., and September through December 1999 by James Sand and Gravel.

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
Jarrett Sand Co. 6505 Skadden Rd. Sandusky, OH 44870 419-359-1750 James Jarrett, owner	Jarrett Sand Co. (84)	Erie	sand & gravel	3,318	3,318	Ee-29	
Jaymar, Inc. 8751 North State Route 7 Cheshire, OH 45620 740-992-6637 Jay Hall, Jr., pres.	Jaymar, Inc. (544)	Gallia	sand & gravel	29,021	29,021	Ga-J	IM-1145
Jefferson Materials Co. 8505 State Route 14 Streetsboro, OH 44241 330-626-3816 Charles Rauh, pres.	Jefferson Materials Co. (265)	Portage	sand & gravel	426,958	426,958	Pe-63	IM-82
Van Johnson Construction, Inc. 2672 Eckert Rd. Lancaster, OH 43130 740-687-6043 Molly D. Johnson, pres.	Molly Johnson Mining (695) (206)	Fairfield	sand & gravel clay	1,523 3,018	1,523 3,018	Fd-VJ	IM-1339
Johnson Road Sand & Gravel 510 Johnson Rd. Kent, OH 44240 330-673-3396 Robert K. Heimann, pres.	Johnson Road Sand & Gravel (615)	Portage	sand & gravel			Pe-98	IM-1219, IM-1231
Johnson Stone Products, Inc. 14647 State Route 511 P.O. Box 39 Oberlin, OH 44074 440-774-1601 Terry A. Johnson, pres.	Kipton Quarry (75)	Lorain	sandstone			Ln-J	IM-1300
Joseph Sand & Gravel, Inc. 16272 Boundary Rd. Wapakoneta, OH 45895 419-568-3787 Kenneth D. Burden, pres.	Joseph Sand & Gravel, Inc. (23)	Auglaize	sand & gravel	3,520	3,520	Ae-23	IM-508
K.C.C.I. P.O. Box 1298 Steubenville, OH 43952 740-543-4389 D. Krulock, pres.	Apex (176)	Harrison, Jefferson	limestone	107,842	116,794	Jfn-K	IM-1164
Keeney Sand & Stone, Inc. 13320 Girdled Rd. Painesville, OH 44077 440-254-4582 Dennis J. Keeney, pres.	Keeney Sand & Stone, Inc. (60)	Lake	sandstone	97,698	97,698	Lke-K	IM-859
Kellstone, Inc. P.O. Box 391 Kelleys Island, OH 43430 216-883-7200 James A. Palladino, pres.	Kellstone, Inc. (174)	Erie	limestone	936,862	936,862	Ee-K	IM-727
Kilbarger Construction, Inc. P.O. Box 946 Logan, OH 43138 740-385-6019 Edward Kilbarger, pres.	Kilbarger Gravel Pit (523)	Hocking	sand & gravel	14,069	14,069	Hg-329	IM-1112
Kimble Clay & Limestone Co. 3596 State Route 39 NW Dover, OH 44622-9801 330-343-1226 Keith B. Kimble, pres.	Kimble Clay & Limestone Co. (117) (41) (63) (63)	Tuscarawas	limestone sandstone clay shale	59,174 11,578 219,138 263,029	59,174 11,578 219,138 263,029	Ts-1818	IM-9
King Limestone, Inc. 53681 Spencer Rd. Cumberland, OH 43732 740-638-3942 Duane King, pres.	King Limestone, Inc. (147)	Guernsey, Muskingum	limestone	273,681	273,681	Gy-309	IM-1030

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
King Quarries, Inc. 41499 County Rd. 7 Caldwell, OH 43724 740-732-2923 David King, pres.	King Quarries, Inc. (194) King Quarries, Inc. (197)	Noble Noble	limestone limestone	44,370	44,370	Ne-K Ne-K1	IM-1254 IM-1292
Kinsman Sand & Gravel Co. P.O. Box 79 Kinsman, OH 44428 440-293-5400 Glenn B. Harnett, pres.	Kinsman Sand & Gravel Co. (593)	Ashtabula	sand & gravel	67,731	67,731	Asa-20	IM-1198
Kipp's Gravel Co., Inc. 4987 State Route 222 Batavia, OH 45103 513-732-1024 Melvin M. Kipp, pres.	Kipp's Gravel Co., Inc. (61)	Clermont	sand & gravel	115,728	115,728	Ct-7	IM-432
Kirby's Sand & Gravel, Inc. 4876 County Hwy. 43 Upper Sandusky, OH 43351-9155 419-927-2260 Gene Kirby, owner	Kirby's Sand & Gravel, Inc. (382) Kirby's Sand & Gravel, Inc. (591)	Wyandot Wyandot	sand & gravel sand & gravel	141,349	141,349	Wt-17 Wt-K	IM-604 IM-943
Knox County Board of Commissioners 110 East High St. Mt. Vernon, OH 43050 740-397-1590 James Henry, county engineer	Apple Valley (148)	Knox	shale	4,188	4,188	Kx-K	IM-870
Koch-Glitsch, Inc. P.O. Box 30070 East Canton, OH 44730 330-488-1651 Ken Krummrich, pres.	Koch-Glitsch, Inc. (174)	Stark	clay	1,335	1,335	Sk-K	IM-1236
T & K Kuhnle Co. P.O. Box 375 Newbury, OH 44065 440-543-5347 Kim Taylor Kuhnle, pres.	Munn Rd. Sand & Gravel (518)	Geauga	sand & gravel	59,041	59,041	Gea-TK	IM-902
L & I Natural Resources, Inc. 10369 Cones Rd. Loveland, OH 45140 513-459-7716 Jerry Walker, pres.	L & I Pit & Mill (430)	Warren	sand & gravel	111,930	111,930	Wan-50	IM-1006
L & M Mineral Co. 5205 State Route 39 Millersburg, OH 44654 330-893-2227 John E. Ling, Jr., pres.	Evans (64) Luikart (65) (65) Spring (170) (691) (55) (77) (77) Spring Industries (588)	Tuscarawas Tuscarawas Tuscarawas Tuscarawas Tuscarawas	shale clay shale limestone sand & gravel sandstone clay shale sand & gravel	60,119 11,900	60,119 11,900	Ts-1884 Ts-1914 Ts-1982 Ts-SI	IM-6 D-0701 IM-621 IM-569
Lafarge Corp. 510 W. Main St. Canfield, OH 44406 330-533-1658 Claude Bastien, pres.	Petersburg - Northern Division (212) Marblehead (84) Shalersville Plant - Northern Division (277)	Mahoning Ottawa Portage	limestone limestone sand & gravel	87,000 3,200,000 839,080	135,655 3,700,000 843,258	Mg-L Oa-7 Pe-68	IM-1353 IM-440 IM-660, IM-1047, IM-1107, IM-1124 IM-582
	Navarre - Northern Division (453)	Stark	sand & gravel	1,000	1,000	Sk-241	
Lafarge Corp. P.O. Box 160 Paulding, OH 45879 703-264-3600 Mike Balchunas, pres.	Paulding Quarry (87) (42)	Paulding	limestone clay	810,000 173,758	810,000 173,758	Pg-1	IM-513
Lake Hope Asphalt, Inc. P.O. Box 38 Nelsonville, OH 45764 740-753-1005 Francis Efaw, pres.	Lake Hope Asphalt, Inc. (21)	Athens	sand & gravel	27,039	55,104	As-1161	IM-97

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
Lakeside Sand & Gravel Co. 3431 Frost Rd. Mantua, OH 44255 330-274-2569 Larry Kotkowski, pres.	Kotkowski Pit (268) Campbell Pit (661)	Portage Portage	sand & gravel sand & gravel	384,944	384,944	Pe-40 Pe-LS	IM-190 IM-1293
LaMar Sand & Fill, Ltd. 9090 State Route 73 Hillsboro, OH 45133 937-393-1264 Larry Miller, owner	LaMar Pit (656)	Highland	sand & gravel	4,887	4,887	Hd-L	IM-1297
Latham Limestone, Inc. P.O. Box 77 Latham, OH 45646 740-493-2677 Robert Murray, pres.	Latham Limestone, Inc. (91)	Pike	limestone	379,550	390,000	Pke-13	IM-213
Leetonia Sand & Gravel Co., Inc. P.O. Box 236 Canfield, OH 44406 330-427-1015 Stephen Holowach, pres.	Leetonia Sand & Gravel Co., Inc. (463) (65)	Columbiana	sand & gravel sandstone			Ca-982	IM-1108
Leonard Sand & Gravel 5668 Springdale Rd. Cincinnati, OH 45251 513-741-9124 Nancy Staat, partner	Leonard Sand & Gravel (137)	Hamilton	sand & gravel	200	200	Hmn-67	IM-529
Letart Corp. P.O. Box 430 Gallipolis Ferry, WV 25515-0430 304-675-7516 Jon P. Thompson, pres.	Plant #4 (560) Plant #5 (559)	Meigs Meigs	sand & gravel sand & gravel	77,955	77,955	Ms-308 Ms-L	IM-1174 IM-1159
Lingvai Peat Co. 01693 CR 8 Edgerton, OH 43517 419-298-2058 Ronald Lingvai, owner	Lingvai Peat Co. (4)	Williams	peat	59	59	Ws-17	
Link Trucking Co. 7305 State Route 699 N McConnelsville, OH 43756 740-962-4480 Paul Kussmaul, pres.	Link Trucking Co. (647)	Morgan	sand & gravel	38,535	39,950	Mon-L	IM-1266
Little Miami Sand & Gravel P.O. Box 36 Lebanon, OH 45036 513-932-3221 Paul N. Herdman, pres.	Little Miami Sand & Gravel Plant #2 (429) Little Miami Sand & Gravel Plant #1 (391)	Warren Warren	sand & gravel sand & gravel	0 0	2,000 2,000	Wan-46 Wan-B	IM-842 IM-679
London Tile Co. 65 Walnut St. New London, OH 44851 419-929-1551 Sylvia Danison, pres.	Biglow (1)	Ashland	shale			Ald-1	IM-334
Loxley Aggregates, Inc. 4277 Falls Rd. Lewisburg, OH 45338 937-839-5488 Matthew L. Loxley, pres.	Loxley Aggregates, Inc. (488) (101)	Preble	sand & gravel clay	2,157 2,308	2,157 2,308	Pre-9	IM-1095
Luburgh Inc. 4174 East Pike Zanesville, OH 43701 740-452-3668 Otto Luburgh, pres.	Luburgh Clay Pit (210)	Muskingum	clay	51,750	51,750	Mum-L	IM-1344
Lucky Sand & Gravel Co. 12018 Frost Rd. Mantua, OH 44255 330-562-6196 Bernard Udelson, pres.	Lucky Sand & Gravel Co. (570)	Portage	sand & gravel	101,939	101,939	Pe-L	IM-154

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

[illegible]²Sales of limestone only, production occurs at another location.

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
Martin Marietta Aggregates (cont.)	Dayton Limestone #404 (71) Rip Rap Rd. #338 (224) Huber Heights Limestone #344 (143) Franklin Gravel #189 (349)	Montgomery Montgomery Montgomery Warren	limestone sand & gravel limestone sand & gravel	10,716 129,994 823,186	0 71,393 835,477	My-23 My-66 My-73 Wan-38	IM-368 IM-677 IM-330 IM-615
Martin Marietta Magnesia Specialties, Inc. 755 Lime Rd. Woodville, OH 43469 419-849-3111 Steve Raffensperger, pres.	Woodville Quarry (102)	Sandusky	limestone	2,704,969	2,704,969	Sy-1	IM-537
Mason's Sand & Gravel Co. 2385 Rathmell Rd. Columbus, OH 43207 614-491-3611 Gordon Masteller, pres.	Mason's Sand & Gravel Co. (100)	Franklin	sand & gravel	76,525	76,525	Fn-11	IM-234
Massillon Materials, Inc. 26 N. Cochran St. P.O. Box 499 Dalton, OH 44618 330-837-4767 Howard J. Wenger, pres.	Massillon Materials, Inc. (495) MMI Warmington Plant (685) MMI Sandyville Plant (687)	Stark Stark Tuscarawas	sand & gravel sand & gravel sand & gravel	561,457 8,147 466	561,457 8,147 466	Sk-M Sk-M1 Ts-MM	IM-1031 IM-1332 IM-1324
Mathews Sand & Gravel 5061 Monroe Center Rd. Conneaut, OH 44030 440-594-1130 Edward Mathews, owner	Mathews Sand & Gravel (651)	Ashtabula	sand & gravel	940	940	Asa-M	IM-1301
Maxville Quarries, Inc. 7957 State Route 668 South Logan, OH 43138 740-385-2568 David J. McCort, pres.	Carpenter (89) Downhour (168)	Perry Perry	limestone limestone	170,416 0	0 183,366	Py-235 ³ Py-343 ³	IM-515 IM-1061
McCarthy Stone Quarry 6326 County Rd. 61 Upper Sandusky, OH 43351 419-294-2611 Charles H. McCarthy, owner	McCarthy Stone Quarry (133)	Wyandot	limestone	303,510	303,510	Wt-3	IM-298
Mecco, Inc. 2504 S. Main St. Middletown, OH 45042 513-422-3781 David T. Morgan, pres.	Mecco, Inc. (39)	Butler	sand & gravel	311,983	273,783	Br-15	IM-316
Mechanicsburg Sand & Gravel, Inc. P.O. Box 18 Mechanicsburg, OH 43044 937-834-2606 John D. Cushman, pres.	Mechanicsburg Sand & Gravel, Inc. (50)	Champaign	sand & gravel	237,544	237,544	Cpn-22	IM-889
Meigs County Commissioners Route 2 Rocksprings Rd. Pomeroy, OH 45769 740-992-2911 David H. Spencer, office mgr.	Meigs County Pit (211)	Meigs	sand & gravel	19,850	19,850	Ms-301	IM-619
The Melvin Stone Co., LLC P.O. Box 158 Sabina, OH 45169 937-584-2486 Dennis J. Garrison, pres.	Melvin Plant (17) Fayette Quarry (28) Williamsport Quarry (92) Richards Farms (481) Plano Road Quarry (199)	Clinton Fayette Pickaway Pickaway Ross	limestone limestone limestone sand & gravel limestone	2,050,632 11,417 288,339 253,550 188,040	1,800,000 11,417 419,300 321,147 276,037	Cln-1 Fe-1 Pky-4 Pky-R Rs-MC1	IM-241 IM-831 IM-209 IM-993 IM-1298
Menuez Bros. Sand & Gravel, Inc. 5366 County Rd. 349 Route 1 Millersburg, OH 44654 330-674-4254 Gene Menuez, pres.	Menuez Bros. Sand & Gravel, Inc. (153)	Holmes	sand & gravel	226,819	244,823	Hs-82	IM-707
Mesenburg Bros., Inc. R.D. 1 Collins, OH 44826 419-668-5691 Peter J. Mesenburg, pres.	Mesenburg Bros., Inc. (20)	Huron	sandstone	9,107	9,107	Hrn-8	IM-268

³Production only at Py-343; sales only at Py-235.

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
Miami River Stone Co. 1700 Miami River Rd. Sidney, OH 45365 937-492-5412 Thomas P. Milligan, pres.	Miami River Stone Co. (110) Washington Twp. Pit (312) Miami River Stone Co. (111) Miami River Stone Co. (110) (311) Staley Pit (577)	Shelby Shelby Shelby Shelby Shelby	limestone sand & gravel limestone limestone sand & gravel sand & gravel	 367 626,264 107,452	 367 556,844 141,869	Shy-6 Shy-13 Shy-16 Shy-17 Shy-SS	IM-389 IM-412 IM-411 IM-389 IM-438
Miami View Mining Co., Ltd. 998-B East Ridge Dr. Lebanon, OH 45036 513-494-1238 Carl Oeder, managing mbr.	Miami View (688)	Warren	sand & gravel	579,987	579,987	Wan-MV	IM-1329
Doug Mill 1800 Mt. Vernon Rd. Newark, OH 43055 740-763-3901 Doug & Susan Mill, owner	Newark (174)	Licking	sand & gravel			Lg-2	IM-184
Miller Bros. Gravel, Inc. 7900 S. Kessler-Frederick Rd. Tipp City, OH 45371 937-836-0981 Thomas O. Miller, pres.	Miller Bros. Gravel, Inc. (233)	Montgomery	sand & gravel	265,583	267,247	My-52	IM-348
Miller Sand & Gravel, Inc. 10228 State Route 82 Windham, OH 44288 330-326-3157 Donald M. Miller, pres.	Miller Sand & Gravel, Inc. (272)	Portage	sand & gravel	3,611	3,611	Pe-39	IM-1078
Millersville Lime Inc. P.O. Box 128 Woodville, OH 43469 419-638-2511 Steve Brookshaw, pres.	Woodville Plant (104) Millersville Plant (103)	Sandusky Sandusky	limestone limestone	838,577 620,398	823,577 630,747	Sy-3 Sy-4	IM-282 IM-381
Mills Rock, Sand, & Soil, Inc. 4022 State Route 303 Mantua, OH 44255 330-297-7579 Alvin Mills, pres.	Mills Pit (676)	Portage	sand & gravel			Pe-M	IM-1312
Mitchell Transport, Inc. 1300 E. 9th St. Suite 1100 Cleveland, OH 44114-1503 216-942-9191 Robert Amos, pres.	North Park Reclamation Clay Center (92)	Lake	clay			Lke-M	IM-1059
Moon Enterprises, Inc. 2701 South Eber Rd. Monclova, OH 43542 419-866-1317 Mark Moon, pres.	Moon Enterprises, Inc. (683)	Lucas	sand & gravel			Ls-ME	IM-1345
Moore's Excavating Co. 2222 N. State Route 68 Urbana, OH 43078 937-653-6288 Ralph Moore, pres.	Moore's Excavating Co. (51) (153) Moore's Excavating Co. (619) Moore's Excavating Co. (620)	Champaign Champaign Clark	sand & gravel clay sand & gravel sand & gravel	39,392 25,347 1,149	39,392 25,347 1,149	Cpn-20 Cpn-25 Ck-29	IM-482 IM-1227 IM-1233
Moraine Materials Co., Inc. 9661 Sugar St. Germantown, OH 45327 937-855-2228 George Kling, pres.	Middletown (41) Germantown (239) (10)	Butler Montgomery	sand & gravel sand & gravel peat	279,104 239,381	279,104 239,381	Br-6 My-41	IM-177 IM-360
Morrow Gravel Co. 11641 Mosteller Rd. Cincinnati, OH 45241 513-771-0820 James P. Jurgensen, pres.	Urbana Materials (48) Morrow Gravel/Walls Materials (63) Morrow Gravel Co. (693) Morrow Gravel Co. (501) Morrow Gravel Co. (502) Morrow Gravel Co. (503)	Champaign Mercer Pike Warren Warren Warren	sand & gravel limestone sand & gravel sand & gravel sand & gravel sand & gravel	138,541 109,115	138,541 109,115	Cpn-1 Mr-2 Pke-M Wan-M Wan-M1 Wan-M2	IM-371 IM-430 IM-1325 IM-728, IM-1065 IM-1051 IM-837
Morton International, Inc. 151 S. Industrial St. P.O. Box 337 Rittman, OH 44270-0337 330-925-3015 Jay Stewart, pres.	Morton Salt Well Field (5)	Wayne	salt	541,061	550,349	We-9129	

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
Morton International, Inc. P.O. Box 428 Grand River, OH 44045-0428 440-639-4243 Paul R. Schank, facility mgr.	Fairport Mine (2)	Lake	salt	1,348,362	1,359,188	Lke-6	
Mt. Eaton Reclamation P.O. Box 256 Mt. Eaton, OH 44659 330-359-5364 Freeman Mullet, pres.	Mt. Eaton Reclamation (64) (144) (144)	Wayne	sandstone clay shale	410,469	410,469	We-26	IM-690, IM-1210
Muskingum River Gravel Co. P.O. Box 1585 Zanesville, OH 43702-1585 740-453-0721 Richard A. McClelland, pres.	S & S Aggregate #8 (152) S & S Aggregate #1 (247) Plant #4 (448) S & S Aggregate Plant #7 (452) Plant #2 (367)	Hocking Muskingum Muskingum Ross Washington	sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel	169,391 269,385 269,385 180,633 72,712	172,193 269,385 269,385 164,186 93,433	Hg-301 Mum-228 Mum-262 Rs-M Wn-38	IM-458 IM-421 IM-422 IM-114 IM-701
National Aggregates, Inc. P.O. Box 340 Malvern, OH 44644 330-866-1999 William Scheckler, pres.	National Aggregates, Inc. (610)	Stark	sand & gravel	339,725	339,725	Sk-1017	IM-1186
National Lime & Stone Co. P.O. Box 120 Findlay, OH 45839-0120 419-422-4341 R. W. Kruse, v. pres.	Lima Plant (5) Buckland Plant (11) Wapakoneta Plant (24) Bucyrus Plant (18) Delaware Plant (21) Findlay Plant (149) Marion Plant (60) Carey Plant (134) Upper Sandusky Plant (380)	Allen Auglaize Auglaize Crawford Delaware Hancock Marion Wyandot Wyandot	limestone limestone sand & gravel limestone limestone limestone limestone limestone sand & gravel	1,444,108 602,629 285,236 1,860,807 4,233,433 1,022,686 672,354 3,299,887 262,972	1,472,229 587,408 285,687 2,011,441 4,424,761 1,171,535 756,357 3,148,454 246,747	An-3 Ae-10 Ae-30 Cd-1 Del-5 Hk-7 Mn-3 Wt-1 Wt-15 ⁴	IM-484 IM-486 IM-598 IM-404 IM-207 IM-1002 IM-168 IM-405 IM-376, IM-551 IM-551
	National Lime & Stone Co. (381)	Wyandot	sand & gravel			Wt-18 ⁴	IM-551
Neer's Sand & Gravel 4859 Township Rd. 45 Bellefontaine, OH 43311 937-585-6733 Arden J. Neer, Sr., owner	Neer's Sand & Gravel (189)	Logan	sand & gravel	132,101	116,399	Lgn-6	IM-459
Nelson Sand & Gravel, Inc. P.O. Box 466 Kingsville, OH 44048 440-224-0198 Thomas H. Nelson, pres.	Nelson Sand & Gravel, Inc. (14) Nelson Sand & Gravel, Inc. (510)	Ashtabula Ashtabula	sand & gravel sand & gravel	22,150 50,330	22,150 50,330	Asa-12 Asa-N	IM-1130 IM-1109
New Baltimore CDD Landfill, Ltd. 6950 River Rd. New Baltimore, OH 45030 513-385-9031 Thomas and Kenneth Henke, owners/partners	New Baltimore CDD Landfill, Ltd. (700) (216)	Hamilton	sand & gravel clay			Hmn-NB	IM-1337
New Carlisle Sand & Gravel Co. 6090 S. Scarff Rd. New Carlisle, OH 45344 937-845-0696 Doug Upton, owner	New Carlisle Sand & Gravel Co. (217)	Miami	sand & gravel	14	14	Mi-501	
Newbury Sand & Gravel 15365 Ravenna Rd. Burton, OH 44021 440-834-0200 Blaine M. Kaufman, owner	Newbury Sand & Gravel (517) (50)	Geauga	sand & gravel sandstone	50,507 13,982	50,507 13,982	Gea-N	IM-1123
Newton Asphalt Paving, Inc. P.O. Box 86 Strasburg, OH 44680 330-878-5648 G. A. Gessner and S. A. Newton, partners	516 (428)	Tuscarawas	sand & gravel	164,508	164,508	Ts-2001	IM-1004
Nick's Trucking 14228 Madison Rd. Middlefield, OH 44062 440-632-1949 Nick R. Loze, owner	Nick's Trucking (584)	Trumbull	sand & gravel	2,180	2,180	Tl-16	IM-1158

⁴Information for Wt-18 is reported under Wt-15.

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
Andy Nixon Contractors, Inc. 13307 CR J35 Montpelier, OH 43543 419-737-2060 Carol J. Nixon, pres.	Nixon Pit (665) (223)	Williams	sand & gravel clay	23,821 153	23,821 153	Ws-N	IM-1291
North Shore Stone Quarries, Inc. 72 Fernhill Ave. Columbus, OH 43228 614-878-0620 Clifford Hammond, pres.	North Shore Stone Quarries, Inc. (109)	Seneca	limestone	6,485	6,485	Sa-8	IM-313
Northern Ohio Paving Co. 1749 Highland Dr. Twinsburg, OH 44087 330-425-7861 Charles G. Rauh, pres.	Allied Plant #3 (316)	Stark	sand & gravel	496,800	496,800	Sk-N	IM-156
Northshore Coal, Inc. 100 W. Main St. St. Clairsville, OH 43950 740-695-7237 C. F. Dawson, pres.	Northshore Limestone (201) Northshore Limestone (195)	Belmont Belmont	limestone limestone	67,917 200	67,917 200	Bt-B Bt-N	D-998 IM-1283
Carl E. Oeder & Sons Sand & Gravel 3890 Turtlecreek Rd. Lebanon, OH 45036 513-494-1238 Carl E. Oeder, pres.	Carl E. Oeder & Sons Sand & Gravel (352)	Warren	sand & gravel	548,212	548,212	Wan-41	IM-629
Oglebay Norton Industrial Sands, Inc. 26900 Coshocton Rd. Howard, OH 43028 740-452-2775 Steven A. Bell, eastern op. mgr.	Millwood Plant (644) (24) Glass Rock Plant (48) (137)	Knox Perry	sand & gravel sandstone sandstone clay	175,810 181,422	219,762 226,777	Kx-1 Py-344	IM-269 IM-1014
Ohio Asphaltic Limestone Corp. 8591 Mad River Rd. Hillsboro, OH 45133 937-364-2191 W. C. Mason, pres.	Ohio Asphaltic Limestone Corp. (42)	Highland	limestone	464,667	464,500	Hd-3	IM-253
Ohio Bulk Transfer Co. P.O. Box 25527 Garfield Heights, OH 44125 216-883-7200 James Palladino, pres.	Twinsburg Sand & Gravel (68)	Summit	sandstone			St-60	IM-1206
Ohio-West Virginia Excavation 57245 Ferry Landing Rd. Dilles Bottom, OH 43947 740-676-7464 Dennis Hendershot, pres.	OH-WV Excavation (424)	Monroe	sand & gravel			Me-508	IM-1000
Olen Corp. 4755 South High St. Columbus, OH 43207-4028 614-491-1515 Wayne Rayburn, pres.	Stewart Plant #4 (459) Hilliard Plant #1 (154) (102) Columbus Plant #3 (465) Fredericktown Plant #2 (161) St. Louisville Plant #5 (176)	Athens Franklin Franklin Knox Licking	sand & gravel limestone sand & gravel sand & gravel sand & gravel sand & gravel	105,000 498,800 2,609,000 612,000 400,000	111,000 619,729 3,070,000 682,000 437,000	As-W Fn-43 Fn-58 Kx-16 Lg-31	IM-979 IM-188 IM-1023 IM-793 IM-246
Oneida Sand & Gravel, Inc. P.O. Box 910 Malvern, OH 44644 330-863-0808 Rodney L. Smitley, pres.	Oneida Sand & Gravel, Inc. (47)	Carroll	sand & gravel	87,379	87,379	Cl-204	IM-554
Osborne Materials Co. P.O. Box 248 Grand River, OH 44045-0248 440-357-5562 Harold T. Larned, pres.	Osborne Materials Co. (2)	Lake Erie	sand & gravel	89,932	89,932	Lke-dredge	
Oster Sand & Gravel, Inc. 5947 Whipple Ave. NW North Canton, OH 44720-7692 330-494-5472 Marlene K. Oster, pres.	Massillon Plant (326) Mudbrook Plant (581) Bolivar Pit (586)	Stark Stark Tuscarawas	sand & gravel sand & gravel sand & gravel	659,436 45,714 363,818	659,436 45,714 363,818	Sk-165 Sk-R Ts-2036	IM-192 IM-697 IM-1155

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
Ours Sand & Gravel 20444 State Route 7 S Crown City, OH 45623 740-256-1378 Donald Ours, owner	Ours Sand & Gravel (466)	Gallia	sand & gravel	3,009	3,009	Ga-O	IM-1028
Oxford Mining Co., Inc. P.O. Box 427 Coshocton, OH 43812 740-622-6302 Charles C. Ungurean, pres.	JTM (181)	Coshocton	clay			Cn-JT	IM-1253
P & H Construction 3745 S. Third St. Ironton, OH 45638 740-533-3030 Paul Popov, pres.	P & H Mine (182)	Lawrence	clay			Le-PH	IM-1268
Patrick Excavating, Inc. 5839 State Route 5 P.O. Box 38 Ravenna, OH 44266 330-296-7706 Tim Patrick, pres.	Patrick (212)	Portage	clay	4,060	4,060	Pe-P	IM-1322
R. H. Penick Co. 1504 Blue Jay Rd. Heath, OH 43056-1767 740-323-3040 R. H. Penick, owner	R. H. Penick Co. (3)	Licking	salt	23,940	23,940	Lg-45	
Penry Stone Co. P.O. Box 176 Radnor, OH 43066 740-595-3373 Walter Penry, pres.	Penry Stone Co. (23) Prospect Plant (198)	Delaware Marion	limestone sand & gravel	394,841 14,883	394,841 14,883	Del-2 Mn-4	IM-299 IM-290
Phillips Sand & Gravel P.O. Box 187 Alpha, OH 45301 937-426-5461 George E. Phillips, pres.	Phillips Sand & Gravel (115)	Greene	sand & gravel	441,547	441,547	Ge-36	IM-305
Piqua Materials, Inc. 1750 W. Statler Rd. Piqua, OH 45356 937-773-4824 Albert R. Donovan, mgr.	Piqua Minerals (64)	Miami	limestone	546,973	595,372	Mi-1	IM-382
Pleasant Valley Limestone 12321 Ideal Rd. Byesville, OH 43723 740-685-6726 George V. Thompson, pres.	Pleasant Valley Limestone (185)	Muskingum	limestone	141,320	141,320	Mum-907	IM-1200
C. F. Poeppelman, Inc. 4755 N. State Route 721 Bradford, OH 45308 937-448-2191 James C. Poeppelman, pres.	C. F. Poeppelman, Inc. (67)	Miami	limestone	361,410	361,410	Mi-10	IM-335
Powell Gravel & Topsoil, Inc. P.O. Box 214 Harrison, OH 45030 513-353-1400 Ronald Powell, pres.	Powell Gravel & Topsoil, Inc. (134) Powell Gravel & Topsoil, Inc. (680)	Hamilton Hamilton	sand & gravel sand & gravel	426,592 474,397	426,592 474,397	Hmn-71 Hmn-P	IM-771 IM-1333
Power Development Corp. P.O. Box 936 Malvern, OH 44644 330-863-0603 Paul W. Robertson, pres.	Robertson (703)	Carroll	sand & gravel	5,000	5,000	Cl-PD	IM-1352
Prairie Lane Sand & Gravel Co. 4401 Prairie Lane Rd. P.O. Box 233 Wooster, OH 44691 330-262-6821 Ralph W. Miller, pres.	Prairie Lane Sand & Gravel Co. (372) (179)	Wayne	sand & gravel shale	205,124 3,809	205,124 3,809	We-11	IM-547

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
Precision Aggregate, Inc. 12205 E. Gypsy Lane Rd. Bowling Green, OH 43402 419-352-4681 Randolph Schmeltz, pres.	Precision Aggregate II (183) (666) Precision Aggregate I (379)	Wood Wyandot	limestone sand & gravel sand & gravel	454,736 99,806	454,736 99,806	Wd-14 Wt-4	IM-1157 IM-520
Putnam County Board of Commissioners Putnam County Courthouse 245 E. Main St., Suite 101 Ottawa, OH 45875 419-691-4800 Jonathan Sandys, civil/environ. eng.	Putnam County Landfill Borrow Pit (221)	Putnam	clay	3,900	3,900	Pm-P	IM-2002
Putnam Stone Co. R.R. 1 7053 Road M Ottawa, OH 45875-9754 419-523-6004 Tony Shroyer, pres.	Putnam Stone Co. (98)	Putnam	limestone	243,650	278,656	Pm-2	IM-570
Quality Ready Mix, Inc. R.R. 5 Wapakoneta, OH 45895 419-738-2817 Robert E. Hirschfeld, pres.	Quality Ready Mix, Inc. (25)	Auglaize	sand & gravel	47,850	51,050	Ae-16	IM-595
Quality Stone Co. 8751 North State Route 7 Cheshire, OH 45620 740-992-6637 Jay Hall, Jr., pres.	Quality Stone Co. (148) Route 32 (182)	Vinton Vinton	limestone limestone	492,516	492,516	Vn-190 Vn-193	D-0761
Quarry Trails 7500 S. Cassel Rd. P.O. Box 520 Vandalia, OH 45377 937-890-1141 John E. Moyer, Sr., pres.	Quarry Trails (178)	Montgomery	limestone			My-Q	IM-860
R & S, Inc. 7522 Wales Rd. NW North Canton, OH 44720 330-499-1024 Gary A. Ross, pres.	Copley Sand & Gravel (427)	Summit	sand & gravel			St-54	IM-934
Rack Sand, Inc. 5175 Este Ave. Cincinnati, OH 45232 513-242-5052 Roy Schweitzer, owner	Rack Sand, Inc. (139)	Hamilton	sand & gravel			Hmn-10	IM-226
Rainbow Sand & Gravel, Inc. P.O. Box 240 Bristolville, OH 44402 330-889-9400 Rex King, pres.	Rainbow Sand & Gravel, Inc. (280)	Portage	sand & gravel	116,850	116,850	Pe-64	IM-1017
John P. Raisch, Inc. P.O. Box 93 Miamisburg, OH 45342 937-866-3094 John P. Raisch, owner	John P. Raisch (562)	Montgomery	sand & gravel			My-R	IM-539
Red Brush Peat Co. 6945 Red Brush Rd. Ravenna, OH 44266 330-297-0923 Barbara H. Linger, owner	Red Brush Peat Co. (482) (116) (9)	Portage	sand & gravel clay peat	25,232 43 5	25,232 43 5	Pe-61	IM-1064
Redskin Transport LLC 6824 Mt. Vernon Rd. Newark, OH 43055 740-745-5965 Rock Van Wey, pres.	Sleepy Hollow Pit (658)	Licking	sand & gravel	13,703	6,000	Lg-S ⁵	IM-1281
Republic Services, Inc. 3619 Gracemont St. SW East Sparta, OH 44626 330-874-3855 Tim Vandersall, site mgr.	Countywide RDF (53)	Stark	clay			Sk-217	D-0938

⁵This mine was operated January through May 1999 by Sleepy Hollow Sand & Gravel and June through December 1999 by Redskin Transport LLC.

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
Richards Service Garage 2170 Wilberforce-Clifton Rd. Xenia, OH 45385 937-372-8263 Roger Richards, owner	Richards Service Garage (547)	Greene	sand & gravel			Ge-R	IM-829
Richland Moulded Brick Co. 1000 Richland Shale Rd. P.O. Box 1711 Mansfield, OH 44901 419-524-0000 Dudley P. Frame, Jr., pres.	Richland Moulded Brick Co. (114)	Richland	shale	14,701	14,701	Rd-R	IM-1035
Ridge Township Quarry 16905 Middlepoint Rd. Van Wert, OH 45891 419-238-2533 Jenny Lautenschleger, foreman	Ridge Township Quarry (122)	Van Wert	limestone	105,878	105,878	Vt-7	IM-642
Riverside Sand & Gravel Co., Inc. P.O. Box 324 Tallmadge, OH 44278-0324 330-673-2021 Albert H. Acken, Jr., pres.	Riverside Sand & Gravel Co., Inc. (333) (49)	Summit	sand & gravel sandstone	3,602 1,632	3,602 1,632	St-24	IM-239
Gary Roberts Excavating 570 Derby Downs Rd. Newark, OH 43055 740-763-3206 Gary L. Roberts, owner	Gary Roberts Excavating (419)	Licking	sand & gravel	460	460	Lg-504	IM-991
Rockwell Sand & Gravel, Inc. 8300 State Route 14 Streetsboro, OH 44241 330-626-5577 Roger Schuck, pres.	Rockwell Sand & Gravel, Inc. (273)	Portage	sand & gravel	256,422	256,422	Pe-85	92
Rogers Group, Inc. 9220 Portland Rd. Castalia, OH 44824 419-483-4390 Donald R. Williamson, CEO	Rogers Group, Inc., dba Sandusky Crushed Stone (25)	Erie	limestone	4,816,884	5,016,089	Ee-11	IM-263
Jim Romig Excavating P.O. Box 260 Sherrodsville, OH 44675 740-269-1225 James Romig, owner	Wilkins Pit (153)	Coshocton	limestone			Cn-A	IM-1011
Rubel Quarry, Inc. 35479 State Route 78 Lewisville, OH 43754 740-567-3217 Randy Rubel, pres.	Rubel Quarry, Inc. (164)	Monroe	limestone			Me-509	IM-1094
Rumpke Mountain Mining Co. 10795 Hughes Rd. Cincinnati, OH 45251 513-851-0122 William J. Rumpke, pres.	Rumpke Mountain Mining Co. (193) (190) (190)	Hamilton	limestone clay shale	365,819 2,043,038	365,819 2,043,038	Hmn-72	IM-1264
Rupp Construction, Inc. 18228 Fulton Rd. Marshallville, OH 44645 330-855-2781 Gary Radabaugh, pres.	Rupp Construction, Inc. (373)	Wayne	sand & gravel	442,381	442,381	We-7	IM-471
S. & M. Builders, Inc. 7862-F West Central Ave. Toledo, OH 43617 419-841-9113 Richard Moses, pres.	S. & M. Builders Pit (659)	Lucas	sand & gravel			Ls-SMB	IM-1290
S & S Aggregate, Inc. P.O. Box 1585 Zanesville, OH 43702-1585 740-453-0721 Richard A. McClelland, v. pres.	Plant #6 (101) Twin Lakes - S & S Agg #11 (281) Twin Lakes - S & S Agg #10 (282) S & S Agg #14 (292) Twin Lakes - S & S Agg #9 (336)	Franklin Portage Portage Richland Summit	sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel	195,788 32,432 32,729 248,345 52,131	179,718 32,729 244,678 68,642	Fn-24 Pe-59 Pe-67 Rd-5 St-44	IM-266 IM-210 IM-202 IM-470 IM-178

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
S & S Transport, Inc. 6710 County Rd. 624 Millersburg, OH 44654 330-674-0051 Phil Schlabach, owner	Patterson (470)	Holmes	sand & gravel	201,079	201,079	Hs-J	IM-1043
Salt Creek Materials, Inc. 880 Spry Rd. Zanesville, OH 43701 740-872-3217 Charles O. Lighthizer, owner	Salt Creek Materials, Inc.-River Pit (248)	Muskingum	sand & gravel			Mum-216	IM-689 ⁶
Samco, Inc. 10217 State Rte. 534 N Middlefield, OH 44062 440-272-5158 J. Jim Holmes, pres.	Springbrook (340) (77) (184)	Trumbull	sand & gravel sandstone clay	323,620 2,672	323,620 2,672	Tl-12	IM-131
Sandco, Inc. P.O. Box 351145 Toledo, OH 43635 419-875-6969 Raymond Cordray, pres.	SANDCO Sand & Topsoil (672)	Fulton	sand & gravel			Ftn-SI	IM-1308
Sandkuhl Clay Works, Inc. 05536 Kossuth-Amanda Rd. Spencerville, OH 45887 419-647-2905 Leslie E. Sandkuhl, pres.	Sandkuhl Clay Works, Inc. (2)	Auglaize	clay	8,613	8,613	Ae-7	
Sandman Trucking, Inc. 9025 Old Airport Hwy. Holland, OH 43528 419-865-1666 Shaun Parker, vice pres.	Sandman Trucking, Inc. (678) Sandman Trucking, Inc. (708)	Fulton Lucas	sand & gravel sand & gravel	190,036 11,704	190,036 11,704	Ftn-SA Ls-ST	IM-1335 IM-2001
Sands Hill Coal Co., Inc. P.O. Box 650 Hamden, OH 45634-0650 740-384-4211 Bonny A. Huffman, pres.	Sands Hill Strip #4 (158)	Jackson	limestone	280,116	280,116	Jkn-SH	IM-1068
Sant Sand & Gravel, Inc. P.O. Box 750 Mt. Vernon, OH 43050 740-397-0000 John D. Ellis, pres.	Sant Sand & Gravel, Inc. (163)	Knox	sand & gravel	180,795	235,500	Kx-3	IM-300
Mark Schaffer Excavating & Trucking, Inc. 1623 Old State Rd. Norwalk, OH 44857 419-668-5990 Mark Schaffer, pres.	Charles Stegall (215)	Wood	limestone			Wd-S	IM-2005
Guy Schieve P.O. Box 83 Birmingham, OH 44816 440-965-8792 Guy Schieve, owner	Guy Schieve Pit (191)	Lorain	sand & gravel	6,750	6,750	Ln-12	IM-731
E. H. Schilling & Sons, Inc. 1154 Twp. Rd. 1117 Ironton, OH 45638 740-532-8463 Earl H. Schilling, pres.	E. H. Schilling & Sons, Inc. (305)	Scioto	sand & gravel			So-78	
Schloss Materials Co. 13700 McCracken Rd. Cleveland, OH 44125 216-587-4900 Raymond E. Schloss, Jr., pres.	Schloss Materials Co. (274) Schloss Materials Co. (569)	Portage Portage	sand & gravel sand & gravel	209,824	209,824	Pe-60 Pe-SM	IM-78 IM-499
Schrader and Son, Inc. 15317 Beaver Pike Jackson, OH 45640 740-286-0258 Jeffrey L. Schrader, pres.	Schrader & Son, Inc. (82)	Pike	sandstone	39,294	39,294	Pke-S	IM-1348

⁶This mine was operated January through August 1999 by Salt Creek Materials, Inc., and September through December 1999 by James Sand and Gravel.

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
Roy B. Schweitzer dba The Gravel Co. 325 Clark Rd. P.O. Box 15501 Cincinnati, OH 45215 513-761-4980 Roy B. Schweitzer, pres.	New Miami Pit (42) Cleves (141)	Butler Hamilton	sand & gravel sand & gravel			Br-3 Hmn-28	IM-719 IM-353
Mark E. Scott P.O. Box 6112 Chillicothe, OH 45601 740-772-4990 Mark E. Scott, owner	Scott Pit (575)	Ross	sand & gravel	50,000	50,000	Rs-P	IM-122
Seaway Sand & Stone, Inc. 2190 Whitehouse-Spencer Rd. Swanton, OH 43558 419-865-5751 Brent Gerken, pres.	Seaway Sand & Stone, Inc. (188) (195) (156) (156)	Lucas	limestone sand & gravel clay shale	314,878 37,878 9,003	314,878 37,878 9,003	Ls-13	IM-492
Seville Sand & Gravel, Inc. 8215 Seville Rd. Lodi, OH 44254 330-948-1812 George D. Cross, pres.	Seville Sand & Gravel, Inc. (206)	Medina	sand & gravel	178,100	178,100	Ma-22	IM-425, IM-442, IM-650, IM-651
Shady Bend Sand & Gravel P.O. Box 336 Sugarcreek, OH 44681 330-852-4862 Daniel O. Miller, owner	Shady Bend Sand & Gravel (72)	Coshocton	sand & gravel	123,786	123,786	Cn-624	IM-243
Shamrock Materials, Inc. 11641 Mosteller Rd. Cincinnati, OH 45241 513-771-0820 James P. Jurgensen, pres.	Shamrock Materials, Inc. (38)	Butler	sand & gravel	660,741	660,741	Br-52	IM-814
Sharon Stone Co. P.O. Box 100 Dexter City, OH 45727 740-732-7100 John P. McCort, pres.	Sharon Stone Co. (167) (197) Sharon Stone Co. (713)	Noble Washington	limestone clay sand & gravel	127,719	127,719	Ne-S Wa-SS	IM-913 IM-2006
Shelly Materials, Inc. 80 Park Dr. P.O. Box 266 Thornville, OH 43076 740-246-6315 Mark Shelly, pres.	Shelly Materials, Inc. Plant #3 (58) Shelly Materials, Inc. Plant #5 (71) Shelly Materials, Inc. Plant #14 (92) Mt. Vernon Plant #4 (160) Shelly Materials, Inc. Plant #8 (51) Shelly Materials, Inc. Plant #12 (200) Shelly Materials, Inc. Plant #6 (212) Shelly Materials, Inc. Plant #22 (447) Shelly Materials, Inc. Plant #9 (244) Prospect (243) Shelly Materials, Inc. Plant #21 (490) Shelly Materials, Inc. Plant #11 (119) Shelly Materials, Inc. Plant #10 (120)	Clark Coshocton Fairfield Knox Logan Marion Meigs Miami Muskingum Muskingum Ross Union Union	sand & gravel sand & gravel sand & gravel sand & gravel limestone sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel limestone limestone sand & gravel limestone	502,817 321,702 981,157 344,056 539 1,030,446 222,719 703,552 286,134 390,557 1,985,276	502,817 321,702 981,157 344,056 0 1,030,446 222,719 703,552 286,134 390,557 1,985,276	Ck-25 Cn-694 Fd-13 Kx-7 Lgn-2 Mn-10 Ms-298 Mi-504 Mum-799 ⁷ Mum-863 ⁷ Rs-27 Un-1 Un-2	IM-358 IM-293 IM-848, IM-1331 IM-235 IM-494 IM-196 IM-32 IM-1032 IM-317 IM-264 IM-1098 IM-208 IM-236
Sidco Development, Inc. 4620 Limestone Valley Rd. Zanesville, OH 43701 740-849-2392 Jeffrey R. Sidwell, pres.	Sidco Development, Inc. (203) Midvale (214) (712)	Muskingum Tuscarawas	limestone limestone sand & gravel	19,135 71 78,749	19,135 71 78,749	Mum-SD Ts-S2	IM-1313 IM-1356
R. W. Sidley, Inc. 615 W. Main St. Conneaut, OH 44030 440-352-9343 Robert Buescher, pres.	Sidley-Kingsville Pit (15)	Ashtabula	sand & gravel	135,134	151,880	Asa-15	IM-783
R. W. Sidley, Inc. 7123 Madison Rd. Thompson, OH 44086 440-352-9343 Robert Buescher, pres.	Thompson Pit (18) Hambden Pit (58) Painesville Plant (166)	Geauga Geauga Lake	sandstone sandstone sand & gravel	150,400 450 5,000	150,400 450 5,000	Gea-1 Gea-S Lke-7	IM-163 IM-161 IM-162

⁷Information for Mum-863 is reported under Mum-799.

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
Sidwell Materials, Inc. 4620 Limestone Valley Rd. Zanesville, OH 43701 740-849-2392 Jeffrey R. Sidwell, pres.	White Cottage (78) Dupler/Ford (186)	Muskingum Muskingum	limestone limestone	344,434 593,191	344,434 593,191	Mum-104 Mum-SB	IM-277 IM-1212, IM-1269
R.G. Silvestri Enterprises 2939 Hubbard Rd. Youngstown, OH 44505 330-759-1822 Ronald G. Silvestri, pres.	R.G. Silvestri Enterprises (76)	Guernsey	sandstone			Gy-S	IM-1306
Joe Simak & Sons Trucking, Inc. 3052 E. Center St. P.O. Box 599 North Kingsville, OH 44068 440-224-1992 Joseph E. Simak, pres.	North Ridge Pit (413) (166) Baird Pit (701) Amboy Pit (677)	Ashtabula Ashtabula Ashtabula	sand & gravel clay sand & gravel sand & gravel	9,948 4,353 17,128 10,328	9,948 4,353 17,128 10,328	Asa-18 Asa-JS Asa-ST	IM-949 IM-1360 IM-1349
Six-B, Inc. P.O. Box 127 Sabina, OH 45169 927-725-7621 Craig Beam, pres.	Island Rd. (251) Ross County Gravel Co. (530)	Pickaway Ross	sand & gravel sand & gravel			Pky-1 Rs-R	IM-428 IM-1143
Slankard Dozer Service, Inc. 8241 Ft. Laurens Rd. NW Strasburg, OH 44680 330-878-5883 Jerry L. Slankard, pres.	Beach City Pit (54)	Tuscarawas	sandstone			Ts-2032	IM-1141
Sleepy Hollow Sand & Gravel 2699 Johnstown-Alexandria Rd. Alexandria, OH 43001 740-924-5600 Denise J. Martin, pres.	Sleepy Hollow Sand & Gravel (658)	Licking	sand & gravel	5,671	5,671	Lg-S ^a	IM-1281
Small's Sand & Gravel, Inc. P.O. Box 617 Gambier, OH 43022 740-427-3677 Michael Small, pres.	Small's Sand & Gravel, Inc. (162) Small's Sand & Gravel, Inc. (165) Small's Sand & Gravel, Inc. (408) Small's Sand & Gravel, Inc. (707)	Knox Knox Knox Knox	sand & gravel sand & gravel sand & gravel sand & gravel	53,673 177,114 50 41,029	53,673 177,114 50 41,029	Kx-5 Kx-15 Kx-17 Kx-S	IM-884, IM-1307 IM-967 IM-968 IM-2000
Sober Sand & Gravel Co. 2898 Tallmadge Rd. Ravenna, OH 44266 330-325-7088 J.R. MacGregor, pres.	Sober Sand & Gravel Co. (275) (211)	Portage	sand & gravel clay	37,151 12,700	37,151 12,700	Pe-18	IM-193
Soehnen Bros. Sand & Gravel, Inc. 10449 Soehnen Rd. NW Beach City, OH 44608 330-756-2244 Francis L. Soehnen, pres.	Soehnen Bros. Sand & Gravel, Inc. (343)	Tuscarawas	sand & gravel	111,493	111,493	Ts-1826	IM-88
Solid Waste Authority of Central Ohio 3142 Broadway Suite 203 Grove City, OH 43123 614-871-5100 Rick Dodge, landfill mgr.	Solid Waste Authority of Central Ohio (218)	Franklin	clay			Fn-SW	IM-1354
Solomon's Mines, Inc. 7732 Salem-Unity Rd. Salem, OH 44460 330-337-0123 Jack Solomon, owner	Solomon's Mines, Inc. (636) (72) (194) Solomon's Mines #1 (196) (135)	Columbiana Mahoning	sand & gravel sandstone clay sand & gravel clay	114,376 18,386 9,528	114,376 18,386 9,528	Ca-S Mg-632 ^a	IM-1258 IM-808
Solon Excavators Sand & Gravel, Inc. 10925 Mantua Center Rd. P.O. Box 1081 Mantua, OH 44255 330-274-8241 Howard Sargent, pres.	May (623) Alger (276)	Geauga Portage	sand & gravel sand & gravel	59,985 271,191	59,985 271,191	Gea-43 Pe-36	IM-1230 IM-90

^aThis mine was operated January through May 1999 by Sleepy Hollow Sand & Gravel and June through December 1999 by Redskin Transport LLC.^aInformation for Mg-632 is reported under Ca-S.

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
Soltis Sand & Gravel 19102 Nelson Ledge Rd. Garrettsville, OH 44231 440-548-5813 James Soltis, owner	Soltis Sand & Gravel (415) (86)	Geauga	sand & gravel clay	3,078 1,384	3,500 1,384	Gea-9	IM-132
South Central Sand & Gravel 340 Bailey Chapel Rd. Piketon, OH 45661 740-289-2629 James Nier, pres.	South Central Sand & Gravel (254)	Pike	sand & gravel	73,844	73,844	Pke-30	IM-786
Southdown Inc. 3250 Linebaugh Rd. Xenia, OH 45385 800-762-0040 Clarence Comer, pres.	Miller et al. (202) (10) Batdorf, Feirstine, Schneider (34) Harner (90) G-Tract (72)	Greene Greene Greene Montgomery	limestone clay limestone clay limestone	283,116 146,416 522,340 230,637	283,116 158,271 591,904 243,336	Ge-8 Ge-9 Ge-44 My-58	IM-364 IM-364 IM-330
Southern Ohio Aggregates, Inc. 11641 Mosteller Rd. Cincinnati, OH 45241 513-771-0820 James P. Jurgensen, pres.	Southern Ohio Aggregates, Inc. (460) Southern Ohio Aggregates, Inc. (551) Southern Ohio Aggregates, Inc. (552) Southern Ohio Aggregates, Inc. (284)	Butler Hamilton Hamilton Preble	sand & gravel sand & gravel sand & gravel sand & gravel			Br-S Hmn-S Hmn-SO Pre-7	IM-1053 IM-746 IM-720 IM-306
Speer Brothers, Inc. 3812 Old Railroad Rd. Sandusky, OH 44870 419-626-5291 David Speer, pres.	101 Location (89)	Erie	clay			Ee-32	IM-1077
Sphagnum Moss Peat Farm 9904 State Route 736 Plain City, OH 43064 614-873-8575 Mike Poling, owner	Sphagnum Moss Peat Farm (2)	Champaign	peat	9,000	9,000	Cpn-9	
Spring Creek Corp. 4723 Hardin-Wapak Rd. Sidney, OH 45365 937-492-4186 Nelson E. Barhorst, pres.	Pence Deposit (314) River Quarry (112) Jones Deposit (315) "H" Mine (494) Schmidt Deposit (213)	Shelby Shelby Shelby Shelby Shelby	sand & gravel limestone sand & gravel sand & gravel limestone	461,945 315,253 50,533	461,945 315,253 50,533	Shy-11 Shy-15 Shy-18 Shy-SC Shy-SC1	IM-743 IM-387 IM-388 IM-1018 IM-2017
City of Springfield 201 Eagle City Rd. Springfield, OH 45502 937-390-7210 Robert Chaffin, Jr., water plant supt.	City of Springfield (437)	Clark	sand & gravel			Ck-7	IM-449
Spring Industries, Inc. 56290 Dilles Bottom Rd. Shadyside, OH 43947 740-671-9400 Glenn Straub, pres.	Bolivar Pit (582) Midvale Pit (344)	Stark Tuscarawas	sand & gravel sand & gravel			Sk-SI Ts-1771	IM-588 IM-77
Spring Run Gravel P.O. Box 466 Killbuck, OH 44637 330-276-2444 Jeff Chaney, owner	Spring Run Gravel (416) (111)	Holmes	sand & gravel shale	14,598	14,598	Hs-96	IM-997
Stanley Mineral Resources 3810 Herr Rd. Sylvania, OH 43560 419-843-2813 Jeffrey Stanley, pres.	Vanlue Plant (196)	Hancock	limestone	215,114	215,114	Hk-A	IM-1299
State Line Resources, Inc. P.O. Box 419 Negley, OH 44441 330-426-9611 James Muse, v. pres.	State Line Resources, Inc. (4) (4)	Columbiana	clay shale	99,298	113,335	Ca-505	IM-13, IM-936
Stewart & Reichman, Inc. 1866 State Route 416 SE Gnadenhutten, OH 44629 740-922-0050 Timothy G. Brown, pres.	Stewart & Reichman, Inc. (346)	Tuscarawas	sand & gravel	78,528	78,528	Ts-111	IM-55

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
Stocker Sand & Gravel Co. P.O. Box 176 Gnadenhutten, OH 44629 740-254-4635 Jeffrey W. Stocker, pres.	Stocker Sand & Gravel Co. - Gnaden (347) Stocker Sand & Gravel Co. - Island (348)	Tuscarawas Tuscarawas	sand & gravel sand & gravel	600,964 726,682	600,964 726,682	Ts-69 Ts-125	IM-51 IM-50
Stone Creek Brick Co. P.O. Box 116 Stone Creek, OH 43840 330-339-5511 A. C. Marsh, Jr., pres.	Stone Creek Brick Clay Mine (67) Stone Creek Brick Shale Pit (67)	Tuscarawas Tuscarawas	clay shale	39,254 5,820	39,254 5,820	Ts-1557 Ts-1558	IM-52 IM-52
Stoneco, Inc. 1345 Ford St. P.O. Box 29A Maumee, OH 43537 419-893-8731 John Bearss, pres.	Maumee Quarry (54) Celina Quarry (62) Rocky Ridge Quarry (83) Auglaize Quarry (88) Scott Quarry (121) Montpelier South Pit (375) Montpelier North Pit (376) Montpelier S. - Takacs Pit (506) Lime City Quarry (131) Portage Quarry (132)	Lucas Mercer Ottawa Paulding Van Wert Williams Williams Williams Wood Wood	limestone limestone limestone limestone limestone sand & gravel sand & gravel sand & gravel limestone limestone	1,010,585 493,967 387,420 1,027,555 323,328 395,000 1,159,390 328,047	1,114,207 558,666 407,398 1,041,657 269,562 394,000 1,103,505 359,580	Ls-2 Mr-1 Oa-14 Pg-2 Vt-3 Ws-6 Ws-9 Ws-T Wd-6 Wd-11	IM-503 IM-592 IM-320 IM-481 IM-495 IM-497 IM-498 IM-1022 IM-480 IM-475
Suburban South Recycling & Disposal Facility 3415 Twp. Rd. 447 Glenford, OH 43739 740-922-3942 Mary J. Brown, pres.	Suburban South Recycling & Disposal Facility (81) (213)	Perry	sandstone clay	372,369 289,153	372,369 289,153	Py-SU	IM-1340
Suever Stone Co., Inc. Bloomlock Rd. P.O. Box 10 Delphos, OH 45833 419-692-9796 Neal Lause, pres.	Suever Stone Co., Inc. (7) Suever Stone Co., Inc. (123)	Allen Van Wert	limestone limestone	128,000 183,000	78,000 183,000	An-4 Vt-1	IM-491 IM-500
Summitville Tiles, Inc. P.O. Box 173 Summitville, OH 43962 330-223-1511 D. W. Johnson, pres.	Summitville Tiles, Inc. (5)	Columbiana	shale	35,761	35,761	Ca-205	IM-74
Sunrise Sand & Gravel 4872 Meade Hollow Rd. Orwell, OH 44076 440-474-0614 Kenneth, Robert, and Richard McElroy, partners	Sunrise Sand & Gravel (617)	Ashtabula	sand & gravel			Asa-21	IM-1239
Sunshine Sand Co. 12400 Broadway Ave Cleveland, OH 44125 216-587-2700 Dorothy M. Strohm, pres.	Sunshine Sand Co. (528)	Portage	sand & gravel	1,843	1,843	Pe-SSC	IM-318
Swingle Drilling, Inc. 713 Keystone St. P.O. Box 220 Crooksville, OH 43731 740-982-4280 Mark Swingle, pres.	T.G. Enterprises (138)	Perry	clay			Py-S1	IM-1183
T.T. & K. Construction, Inc. 32 State Route 239 Portsmouth, OH 45663 740-858-6661 Patricia Picklesimer, pres.	T.T. & K. Construction, Inc. (630)	Scioto	sand & gravel			So-102	IM-1250
Tackett Builders 906 Charleston Pike Chillicothe, OH 45601 740-772-5431 Carmel G. Tackett, owner	Tackett Builders (606) (150)	Ross	sand & gravel shale	800	800	Rs-T	IM-1189
E.H. Taylor, Inc. 2603 Dorr St. Toledo, OH 43607 419-536-6020 Bobby J. Howard, pres.	E.H. Taylor, Inc. (709)	Lucas	sand & gravel			Ls-T	IM-2012

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
Taylorville Rd. Hardfill 4252 Taylorville Rd. Huber Heights, OH 45424 937-233-7500 James T. McDonald, pres.	Taylorville Rd. Hardfill (236)	Montgomery	sand & gravel			My-55	IM-571
TCNC Industries, Inc. P.O. Box 101 N. Versailles, PA 15137 412-672-6480 Chester Winters and Tom Schwer, partners	TCNC Industries, Inc. (210)	Carroll	limestone			Cl-TC	IM-1319
Teague Gravel Co., Inc. 10924 Kinsman Rd. Newbury, OH 44065 440-564-5671 Donald R. Teague, pres.	Teague Gravel Pit (109)	Geauga	sand & gravel	51,198	51,198	Gea-35	IM-321
Thiel Construction Co. P.O. Box 225 Blakeslee, OH 43505 419-272-2712 Lee Thiel, pres.	Thiel Construction Co. (633)	Williams	sand & gravel	7,239	7,239	Ws-21	IM-1225
Don Thompson Excavating, Inc. 1471 W. Paintersville Rd. Spring Valley, OH 45370 937-862-7911 Todd Thompson, pres.	Don Thompson Excavating, Inc. (546)	Greene	sand & gravel			Ge-46	IM-1149
Tip Stone Co., Inc. P.O. Box 367 Troy, OH 45373 937-890-4051 Thomas L. Eidemiller, pres.	Troy (446) Meeker (238)	Miami Montgomery	sand & gravel sand & gravel	4,085 56,000	4,085 56,000	Mi-12 My-61	IM-467 IM-468
Towne Square Products 156 E. Broadway Westerville, OH 43081 614-882-6990 Suzanne Edgar, pres.	Towne Square Products (41)	Noble	clay			Ne-66	IM-664
Tri-County Limestone Co. 4664 Hardin-Marion Rd. N Kenton, OH 43326 419-675-7127 Norman Cochran, pres.	Tri-County Limestone Co. (61)	Marion	limestone	264,546	264,546	Mn-1	IM-250
Tri-State Asphalt Products P.O. Box 6670 Wheeling, WV 26003 740-671-9400 Glenn Straub, pres.	Tri-State Asphalt Products (26)	Belmont	sand & gravel	5,256	0	Bt-74	IM-288
Trout Sand & Gravel Co. Route 4 Marietta, OH 45750 740-373-7471 Henry C. Trout, Jr., owner	Trout Sand & Gravel Co. (369)	Washington	sand & gravel	31,323	48,324	Wn-510	IM-25
Tuffco Sand & Gravel, Inc. P.O. Box 399 Marysville, OH 43040 614-873-3978 Charles Lewis, pres.	Tuffco Sand & Gravel, Inc. (474) (207)	Madison	sand & gravel clay	175,133	175,133	Mdn-11	IM-1063
Twinsburg Development Corp. P.O. Box 248 Grand River, OH 44045 330-995-0640 Michael Osborne, pres.	Twinsburg Development Corp. (260) (204)	Portage	sand & gravel clay	100,051	100,051	Pe-84	IM-868
U.S. Aggregates 5400 W. 86th St. P.O. Box 68123 Indianapolis, IN 46268 317-872-6010 James Fehsenfeld, pres.	U.S. Aggregates/Richmond Plant (571)	Preble	sand & gravel	239,500	267,500	Pre-AAC	IM-779

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
U.S. Silica Co. P.O. Box 146 Dundee, OH 44624 800-243-7500 Richard E. Goodell, pres.	Dundee Mine (42)	Tuscarawas	sandstone	15,667	15,500	Ts-1660	IM-68
Valley Clay Mining Co. 7052 Rosehill Rd. Roseville, OH 43777 740-697-0620 F. Klemm Ungemach III, pres.	Spring #4 (122) Tague Mine (173)	Muskingum Perry	clay clay	8,800 1,700	8,800 1,700	Mum-904 Py-V	IM-1127 IM-1245
Valley Materials Co. 4947 U.S. Route 23 S P.O. Box 400 Piketon, OH 45661 740-289-4400 Ralph McFann, pres.	Valley Materials Co. (252) (99) Valley Materials #2 (694)	Pike Pike	sand & gravel clay sand & gravel	71,124	33,309	Pke-26 Pke-V	IM-142 IM-1330
Van Wey Sand & Gravel, Inc. 6824 Mt. Vernon Rd. NE Newark, OH 43055 740-745-5965 Rock Van Wey, pres.	Van Wey Sand & Gravel, Inc. (179)	Licking	sand & gravel	804,641	831,000	Lg-10	IM-217
Ralph C. Wagner & Sons 7317 Brinker St. Navarre, OH 44662 330-495-7414 Michael Wagner, owner	Wagner & Sons (579)	Stark	sand & gravel			Sk-W	IM-867
Wagner Quarries Co. 4203 Milan Rd. Sandusky, OH 44870 419-625-8141 Martin A. Jones, pres.	Wagner Quarries Co. (26)	Erie	limestone	2,422,009	2,315,688	Ee-1	IM-310
Wallace Road Sand & Gravel P.O. Box 74 Petersburg, OH 44454 330-542-1100 David Sugar, pres.	Wallace Road Sand & Gravel (475)	Mahoning	sand & gravel	7,800	7,800	Mg-630	IM-1091
Waller Bros. Stone Co. P.O. Box 157 McDermott, OH 45652 740-259-2356 F. L. Waller, pres.	Inskeep Quarry (36) Crabtree Quarry (37) Miller Quarry (38)	Scioto Scioto Scioto	sandstone sandstone sandstone	8,628 5,412	8,628 5,412	So-48 So-76 So-82	IM-140 IM-141 IM-158
Carl Walter 11098 Bower Rd. Minerva, OH 44657 330-894-2315 Carl Walter, owner	Walter Pit (653)	Columbiana	sand & gravel			Ca-W	IM-1279
Ward Materials, Inc. 385 Oak St. R.R. 2 Leipsic, OH 45856 419-943-2450 Arnold W. Rosebrock, pres.	Ward Materials, Inc. (2)	Allen	sand & gravel	36,158	36,158	An-15	IM-721
Don Wartko Construction, Inc. 975 Tallmadge Rd. Kent, OH 44240 330-673-5252 Donald Wartko, pres.	Don Wartko Construction, Inc. (483)	Portage	sand & gravel	503	503	Pe-92	IM-522
Waste Management/Chambers Development of Ohio, Inc. 19469 County Rd. 7 Coshocton, OH 43812 740-622-5590 Charles A. Wilcox, pres.	Harrison County Landfill (188)	Harrison	clay			Hn-CD	D-1105
Waterland Trucking Service, Inc. P.O. Box 930335 Wixom, MI 48393-0335 248-349-1582 Richard D. Massuch, pres.	Adams County Quarry (173)	Adams	limestone			Ads-H	IM-805

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
Waterloo Coal Co., Inc. P.O. Box 626 Jackson, OH 45640 740-682-7787 T. L. Darlington, Jr., v. pres.	Diamond Stone (9) (128) Waterloo Coal Stone Plant - Zoar Mill (47) (23)	Athens Jackson	limestone clay limestone clay	381,804 359,312 6,000	381,804 359,312 6,000	As-533 Jkn-367	IM-17 D-594, D-968, D-1083
Watson Gravel, Inc. 2728 Hamilton-Cleves Rd. P.O. Box 277 Ross, OH 45061 513-863-0070 Ronald E. Watson, pres.	Watson Pit (44) River Pit (667) Harrison Pit (142) Dry Fork Rd. S & G #138 (131) Campbell Rd. #177 (407) Mason Pit (363)	Butler Butler Hamilton Hamilton Hamilton Warren	sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel	1,077,824 59,111 1,265,779 32,489 	1,077,824 59,111 1,265,779 0 	Br-47 Br-57 Hmn-60 Hmn-68 Hmn-69 Wan-10	IM-111 IM-761 IM-747 IM-969 IM-465
Weber Sand & Gravel, Inc. 14586 U.S. Route 127 EW Bryan, OH 43506 419-636-7920 Thomas G. Weber, pres.	Weber Sand & Gravel, Inc. (377)	Williams	sand & gravel	269,727	269,727	Ws-11	IM-509, IM-661
Joann O. Weddle 2419 U.S. Route 68 N Yellow Springs, OH 45387 937-374-1234 Joann Weddle, owner	S & W (549) (219)	Greene	sand & gravel clay	9,858 13,340	9,858 13,340	Ge-W	IM-645
Weidle Sand & Gravel, Inc. P.O. Box 247 Germantown, OH 45327 937-855-2228 Ron Weidle, Sr., pres.	Weidle Sand & Gravel, Inc. (158) (158)	Montgomery	clay shale			My-W	IM-1207
Welch Sand & Gravel, Inc. 10217 Columbia St. Harrison, OH 45030-9751 513-353-3220 Charles H. Welch, pres.	Schlichter Pit (45) Fernald Pit (143) East Miami Pit (144)	Butler Hamilton Hamilton	sand & gravel sand & gravel sand & gravel	165,689 622,891 429,311	165,689 622,891 429,311	Br-38 Hmn-42 Hmn-48	IM-218 IM-823 IM-220
White Rock Quarry, L.P. P.O. Box 119 Clay Center, OH 43408-0119 419-855-8388 Jim Fehsenfeld, pres.	White Rock Quarry, L.P. (82)	Ottawa	limestone	1,577,826	1,542,009	Oa-6	IM-296
Frank Widmor Coal Co., Inc. P.O. Box 176 Blaine, OH 43909 740-676-3339 Jay Van Dyne, pres.	Frank Widmor Coal Co., Inc. (152) (56) (105) (105)	Belmont	limestone sandstone clay shale	271,105 5,525 	271,105 5,525 	Bt-1190	IM-1089
Mark Williams Blacktop Co., Inc. Route 4 Box 34 Marietta, OH 45750 740-373-2457 Mark Williams, owner	Williams Pit #2 (504) Williams Pit #1 (534)	Washington Washington	sand & gravel sand & gravel			Wn-1007 Wn-1009	IM-1042 IM-525
Willowbrook 39130 Brookfield St. P.O. Box 304 Lisbon, OH 44432 330-424-7493 Ray Perrino, owner	Willowbrook (538)	Columbiana	sand & gravel	24,140	24,140	Ca-993	IM-1180
Gene T. Wilson P.O. Box 46 Mt. Sterling, OH 43143 740-869-4406 Eugene T. Wilson, owner	Wilson Pit (565)	Pickaway	sand & gravel	624	624	Pky-W	IM-1176
Dennis Winzeler 920 Center St. Bryan, OH 43506 419-636-4285 Dennis & Polly Winzeler, owners	Dennis Winzeler (378)	Williams	sand & gravel			Ws-14	IM-614
Wise Gravel 8535 W. Klinger Rd. Covington, OH 45318 513-473-3246 John A. Wise, owner	Wise Gravel (221)	Miami	sand & gravel	1,028	1,028	Mi-9	IM-408

1999 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS—Continued

Name, address, telephone number, and president/owner/manager of company	Name of mine (and map location number)	County	Commodity	1999 sales (tons)	1999 production (tons)	State mine number	Mining and reclamation permit number
Wyandot Dolomite, Inc. P.O. Box 99 Carey, OH 43316-0126 419-396-7641 David J. Wolfe, pres.	Wyandot Dolomite, Inc. (135)	Wyandot	limestone	1,985,142	2,039,390	Wt-8	IM-273
Wylie and Sons Landscaping 2550 County Rd. E-F P.O. Box 29 Swanton, OH 43558 419-826-1200 Thomas Wylie, owner	R. K. Walters (696) Wylie and Sons Landscaping (706) M. & K. Knapp (697) L. Diller (698)	Fulton Fulton Fulton Lucas	sand & gravel sand & gravel sand & gravel sand & gravel	24,750 31,275 31,640	24,750 31,275 31,640	Ftn-W Ftn-W1 Ftn-WY Ls-WY	IM-1328 IM-2007 IM-1334 IM-1321
Wysong Gravel Co. P.O. Box 5 West Alexandria, OH 45381 937-962-2559 John & Carroll Wysong, owners	Wysong Gravel Co. (285) West Alexandria Plant (286)	Preble Preble	sand & gravel sand & gravel	155,789 107,658	155,789 107,658	Pre-4 Pre-6	IM-477 IM-478
Wysong Stone Co. 5897 State Route 503 N P.O. Box 159 Lewisburg, OH 45338 937-962-2559 Gerald E. Wysong, pres.	Wysong Stone Co. (95)	Preble	limestone	150,089	150,089	Pre-5	IM-447
X L Sand & Gravel P.O. Box 255 Negley, OH 44441 330-426-9876 Robert Lansberry, pres.	X L Sand & Gravel (68) X L Sand & Gravel (705)	Columbiana Columbiana	sand & gravel sand & gravel	60,814	60,814	Ca-881 Ca-XL	IM-611 IM-1347
Xenia Sand, Gravel, & Asphalt Co. 588 Dayton-Xenia Rd. Xenia, OH 45385 937-372-2978 David A. Thompson, owner	Xenia Sand & Gravel, Ltd. (117)	Greene	sand & gravel	250	250	Ge-10	IM-518
Young's Sand & Gravel Co. P.O. Box 117 Loudonville, OH 44842 419-994-3040 Delmar and Melvin Young, co-owners	Norman Sprang (8) Ayers (412) Chuck Spreng (616)	Ashland Ashland Ashland	sand & gravel sand & gravel sand & gravel	77,279 126,458 147,533	77,279 126,458 147,533	Ald-7 Ald-15 Ald-Y	IM-392 IM-944 IM-1216
Zerger's Quarry 100 N. Sycamore St. Woodsfield, OH 43793 740-472-1675 Herman Zerger, owner	Zerger's Quarry (80)	Noble	limestone			Ne-86	IM-70
Zoar Mining Co. P.O. Box 667 Zoar, OH 44697-0667 330-223-1511 David W. Johnson, pres.	Zoar Mine (71) (71)	Tuscarawas	clay shale			Ts-540	IM-28
Zollinger Sand & Gravel Co. 11899 Easton Rd. Rittman, OH 44270 330-855-2464 Carl Zollinger, pres.	Zollinger Sand & Gravel Co. (374) (193)	Wayne	sand & gravel clay	45,893 3,600	45,893 3,600	We-15	IM-398



Aerial view of Ostrander quarry and processing plant in Union County *circa* 1955. View is to the southwest. The Union Stone Company operated the quarry at that time. Today the quarry is operated by Shelly Materials, Inc. (see p. 96). Photo courtesy of Scott Wilson, Shelly Materials, Inc.

1999 LIMESTONE/DOLOMITE COMPANIES WITH SALES OR PRODUCTION

Company	No. of operations	Sales (tons)	Production (tons)	Company	No. of operations	Sales (tons)	Production (tons)
Ayers Limestone Quarry, Inc.	1	132,705	132,705	National Lime & Stone Co.	7	13,135,904	13,572,185
Barrett Paving Materials, Inc.	2	909,082	930,000	North Shore Stone Quarries, Inc.	1	6,485	6,485
Belden Brick Co.	3	31,080	31,080	Northshore Coal, Inc.	2	68,117	68,117
Blue Jay Enterprises of Ts. Co., Inc.	2	977	977	Ohio Asphaltic Limestone Corp.	1	464,667	464,500
Bluffton Stone Co.	1	578,032	562,668	Olen Corp.	1	498,800	619,729
Chesterhill Stone Co.	1	848,545	840,240	Penry Stone Co.	1	394,841	394,841
Christman Quarry	1	78,933	78,933	Piqua Materials, Inc.	1	546,973	595,372
Con-Ag, Inc.	1	263,675	294,501	Pleasant Valley Limestone	1	141,320	141,320
Custar Stone Co.	1	373,616	378,856	C. F. Poeppelman, Inc.	1	361,410	361,410
Davon, Inc.	3	3,759,552	3,856,150	Precision Aggregate, Inc.	1	454,736	454,736
Demmy Construction, Inc.	1	16,429	16,429	Putnam Stone Co.	1	243,650	278,656
C. E. Duff & Son, Inc.	2	388,139	388,139	Quality Stone Co.	1	492,516	492,516
ENZ, Inc.	1	190,659	190,659	Ridge Township Quarry	1	105,878	105,878
ESSROC Cement Corp.	2	800,793	800,793	Rogers Group, Inc.	1	4,816,884	5,016,089
East Fairfield Coal Co.	1	929,110	929,110	Sands Hill Coal Co., Inc.	1	280,116	280,116
Erie Blacktop, Inc.	1	168,411	168,411	Seaway Sand & Stone, Inc.	1	314,878	314,878
GenLime Inc.	1	1,082,208	1,217,429	Sharon Stone Co.	1	127,719	127,719
Gotttron Bros. Co.	1	83,500	82,800	Shelly Materials, Inc.	3	2,719,889	2,719,889
J. M. Hamilton & Sons Co., Inc.	1	98,836	98,836	Sidco Development, Inc.	2	19,206	19,206
Hanson	5	3,749,842	4,000,995	Sidwell Materials	2	937,625	937,625
Hardin Quarry Co., Inc.	1	286,543	286,543	Southdown Inc.	3	1,036,093	1,118,356
Honey Creek Stone Co.	1	315,286	373,524	Spring Creek Corp.	1	315,253	315,253
K.C.C.I.	1	107,842	116,794	Stansley Mineral Resources	1	215,114	215,114
Kellstone, Inc.	1	936,862	936,862	Stoneco, Inc.	7	4,730,292	4,854,575
Kimble Clay & Limestone Co.	1	59,174	59,174	Suever Stone Co., Inc.	2	311,000	261,000
King Limestone, Inc.	1	273,681	273,681	Tri-County Limestone Co.	1	264,546	264,546
King Quarries, Inc.	1	44,370	44,370	Wagner Quarries Co.	1	2,422,009	2,315,688
Lafarge Corp.	3	4,097,000	4,645,655	Waterloo Coal Co., Inc.	2	741,116	741,116
Latham Limestone, Inc.	1	379,550	390,000	White Rock Quarry, L.P.	1	1,577,826	1,542,009
MacRitchie Materials, Inc.	1	352,486	374,637	Frank Widmor Coal Co., Inc.	1	271,105	271,105
Maple Grove Stone Co.	1	730,270	1,151,371	Wyandot Dolomite, Inc.	1	1,985,142	2,039,390
Marshall Quarry, Inc.	1	3,129	3,129	Wysong Stone Co.	1	150,089	150,089
Martin Marietta Aggregates	12	9,361,350	9,640,898	TOTAL: 72 companies	124	79,494,912	82,175,106
Martin Marietta Magnesia Specialties, Inc.	1	2,704,969	2,704,969				
Maxville Quarries, Inc.	2	170,416	183,366				
McCarthy Stone Quarry	1	303,510	303,510				
The Melvin Stone Co., LLC	4	2,538,428	2,506,754				
Miami River Stone Co.	2	626,631	557,211				
Millersville Lime Inc.	2	1,458,975	1,454,324				
Morrow Gravel Co.	1	109,115	109,115				

1999 OHIO DIRECTORY OF LIMESTONE/DOLOMITE MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

For those mines that have not been assigned a state mine number, a letter designation is used (example: Ch-A).

County	Name of operator	Name of mine or quarry	Township	Geological unit	Type and principal use	State mine number
Adams	Davon, Inc.	Plum Run Stone	Meigs	Peebles, Greenfield & Tymochtee Dolomites (Silurian)	crushed stone — unspecified	Ads-1
Allen	Bluffton Stone Co.	Bluffton Stone Co.	Richland	Tymochtee Dolomite (Silurian)	crushed stone — riprap, portland cement concrete, road construction/resurfacing, asphaltic dimension stone; aglime	An-1
	National Lime & Stone Co.	Lima Plant	Bath	Silurian	crushed stone — riprap, railroad ballast, commercial building	An-3
	Suever Stone Co., Inc.	Suever Stone Co., Inc.	Spencer	Tymochtee Dolomite (Silurian)	crushed stone — road construction/resurfacing, asphaltic concrete, commercial building, aglime	An-4
Athens	Waterloo Coal Co., Inc.	Diamond Stone	Lee		crushed stone — unspecified	As-533
Auglaize	Con-Ag, Inc.	Con-Ag, Inc.	Noble	Cedarville Dolomite (Silurian)	crushed stone — riprap, road construction/resurfacing, asphaltic concrete	Ae-31
	National Lime & Stone Co.	Buckland Plant	Moulton	Silurian	crushed stone — riprap, railroad ballast, commercial building; aglime	Ae-10
Belmont	Ayers Limestone Quarry, Inc.	Ayers Limestone Quarry, Inc.	Pease	Permian	crushed stone — riprap, road construction/resurfacing	Bt-716
	Northshore Coal, Inc.	Northshore Limestone	Wheeling	Fishpot limestone (Pennsylvanian)	crushed stone — riprap, road construction/resurfacing	Bt-B
	Frank Widmor Coal Co., Inc.	Northshore Limestone Frank Widmor Coal Co., Inc.	Wheeling Pultney	Fishpot limestone (Pennsylvanian) Fishpot limestone (Pennsylvanian)	crushed stone — riprap crushed stone — road construction/resurfacing	Bt-N Bt-1190
Brown	Davon, Inc.	Eagle Crushed Stone	Eagle	Brassfield Limestone (Silurian)	crushed stone — unspecified	Bn-EC
Clark	Demmy Construction, Inc.	Demmy Constuction, Inc.	Mad River		crushed stone — riprap, asphaltic concrete	Ck-501
Clinton	The Melvin Stone Co., LLC	Melvin Plant	Richland	Cedarville Dolomite (Silurian)	crushed stone — riprap, portland cement concrete, road construction/resurfacing, asphaltic concrete, commercial building; aglime	Cln-1
Crawford	National Lime & Stone Co.	Bucyrus Plant	Holmes	Devonian	crushed stone — riprap, railroad ballast, flux, commercial building, extenders/fillers; aglime	Cd-1
Delaware	Martin Marietta Aggregates	Delaware #332	Scioto	Columbus Limestone (Devonian)	crushed stone — road construction/resurfacing, asphaltic concrete	Del-3
	National Lime & Stone Co.	Shawnee #324	Concord	Columbus & Delaware Limestones (Devonian)	crushed stone — road construction/resurfacing	Del-4
	Penry Stone Co.	Delaware Plant	Scioto	Columbus & Delaware Limestones (Devonian)	crushed stone — riprap, railroad ballast, commercial building; aglime	Del-5
	Erie Blacktop, Inc.	Penry Stone Co.	Radnor	Columbus & Delaware Limestones (Devonian)	crushed stone — road construction/resurfacing, commercial building	Del-2
Erie	Kellstone, Inc.	Erie Blacktop Quarry	Margaretta	Columbus Limestone (Devonian)	crushed stone — riprap, portland cement concrete, road construction/resurfacing, asphaltic concrete; aglime	Ee-27
	Rogers Group, Inc.	Kellstone, Inc.	Kelleys Island	Detroit River Group (Devonian)	crushed stone — unspecified	Ee-K
	Wagner Quarries Co.	Rogers Group Inc., dba Sandusky Crushed Stone	Groton	Columbus & Delaware Limestones (Devonian)	crushed stone — riprap, portland cement concrete, road construction/resurfacing, railroad ballast, asphaltic concrete, commercial building; aglime	Ee-11
		Wagner Quarries Co.	Perkins	Upper Columbus & Delaware Limestones (Devonian)	crushed stone — road construction/resurfacing	Ee-1

1999 OHIO DIRECTORY OF LIMESTONE/DOLOMITE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

County	Name of operator	Name of mine or quarry	Township	Geological unit	Type and principal use	State mine number
Fayette	Martin Marietta Aggregates The Melvin Stone Co., LLC	Blue Rock Limestone #342 Fayette Quarry	Perry Green	Tymochtee Dolomite (Silurian)	crushed stone — road construction/resurfacing, asphaltic concrete, extenders/fillers	Fe-2
Franklin	Martin Marietta Aggregates Olen Corp.	Columbus Limestone #321 Marble Cliff #323 Hilliard Plant #1	Franklin, Jackson, Marion Norwich Brown	Columbus Limestone (Devonian)	crushed stone — riprap, portland cement concrete, road construction/resurfacing, asphaltic concrete, commercial building	Fn-53
Greene	Martin Marietta Aggregates Southdown Inc.	Cedarville Limestone #341 Batdorf, Feirsteine, Schneider Miller et al.	Cedarville Bath, Beaver Creek Bath	Columbus & Delaware Limestones (Devonian) Salina Group (Silurian)	crushed stone — road construction/resurfacing, commercial building	Fn-2 Fn-43
Guernsey	King Limestone, Inc.	King Limestone, Inc.	Spencer	Cedarville Dolomite (Silurian)	crushed stone — riprap, road construction/resurfacing, commercial building	Ge-17
Hamilton	Martin Marietta Aggregates	Camp Dennison - 455	Symmes	upper Brassfield Limestone (Silurian)	crushed stone — unspecified; stone for portland cement manufacture	Ge-9
Hancock	National Lime & Stone Co. Stansley Mineral Resources	Findlay Plant Vanlue Plant	Liberty Bigick	Niagaran dolomite (Silurian)	crushed stone — unspecified; stone for portland cement manufacture	Ge-8
Hardin	C. E. Duff & Son, Inc.	C. E. Duff & Son, Inc.	Jackson	Fishpot limestone (Pennsylvanian)	crushed stone — road construction/resurfacing	Gy-309 ¹
Harrison	Hardin Quarry Co., Inc.	Hardin Quarry	Pleasant	Niagaran dolomite (Silurian)	crushed stone — riprap, portland cement concrete, road construction/resurfacing	Hmn-5 ²
Highland	Davon, Inc. Marshall Quarry, Inc. Martin Marietta Aggregates Ohio Asphaltic Limestone Corp.	Highland Stone Marshall Quarry, Inc. Lynchburg Limestone 459 Ohio Asphaltic Limestone Corp.	German Hamer Marshall Union Union	Niagaran dolomite (Silurian)	crushed stone — riprap, railroad ballast, commercial building; aglime	Hk-7
Jackson	Sands Hill Coal Co., Inc. Waterloo Coal Co., Inc.	Sands Hill Strip #4 Waterloo Coal Stone Plant - Zoar Mill	Milton Madison	Greenfield Dolomite (Silurian)	crushed stone — riprap, portland cement concrete, road construction/resurfacing, asphaltic concrete, commercial building; aglime	Hk-A
Jefferson	K.C.C.I.	Apex	Springfield	Tymochtee Dolomite (Silurian)	crushed stone — riprap, portland cement concrete, road construction/resurfacing, asphaltic concrete, extenders/fillers, unspecified	Hdn-S
Logan	C. E. Duff & Son, Inc.	C. E. Duff & Son, Inc.	Richland	Brassfield & Dayton Limestones (Silurian)	crushed stone — riprap, portland cement concrete, road construction/resurfacing, asphaltic concrete, extenders/fillers, unspecified	Hdn-2
				Vanport limestone (Pennsylvanian)	crushed stone — road construction/resurfacing; aglime	Jfn-K ³
					crushed stone — unspecified	Hd-2
					crushed stone — road construction/resurfacing	Hd-4
					crushed stone — riprap, road construction/resurfacing, asphaltic concrete, extenders/fillers	Hd-D
					crushed stone — riprap, road construction/resurfacing, asphaltic concrete; aglime	Hd-3
					crushed stone — road construction/resurfacing; aglime	Jkn-SH
					crushed stone — unspecified	Jkn-367
					crushed stone — riprap, road construction/resurfacing, asphaltic concrete, extenders/fillers, unspecified	Jfn-K ⁴
					crushed stone — riprap, portland cement concrete, road construction/resurfacing, commercial building	Lgn-15

Lucas	Martin Marietta Aggregates	East Liberty #326	Perry	Tymochtee Dolomite (Silurian)	crushed stone — road construction/resurfacing, asphaltic concrete crushed stone — portland cement concrete, road construction/resurfacing, asphaltic concrete, commercial building, unspecified	Lgn-1 Lgn-2
	Shelly Materials, Inc.	Shelly Materials, Inc. Plant #8	McArthur, Richland			
	Barrett Paving Materials, Inc.	Sylvania Quarry	Sylvania			
	Hanson	Sylvania (Silica) Waterville Quarry	Sylvania Waterville			
Mahoning	Seaway Sand & Stone, Inc.	Seaway Sand & Stone Maumee Quarry	Swanton Waynesfield	Detroit River Group (Devonian) Bass Islands Group (Silurian) Greenfield Dolomite (Silurian) Tymochtee Dolomite (Silurian)	crushed stone — riprap, road construction/resurfacing, asphaltic concrete, commercial building crushed stone — unspecified crushed stone — unspecified crushed stone — riprap crushed stone — portland cement concrete, road construction/resurfacing, flux, asphaltic concrete, commercial building; aglime	Ls-12 Ls-3 Ls-1 Ls-13 Ls-2
	ESSROC Cement Corp.	Bessemer Pit Carbon Pit	Poland, Poland, Springfield			
	East Fairfield Coal Co. Honey Creek Stone Co. Lafarge Corp.	Withers-Petersburg Honey Creek Stone Co. Petersburg - Northern Division	Springfield Springfield Springfield			
	J. M. Hamilton & Sons Co., Inc.	J. M. Hamilton & Sons Co., Inc.	Marion			
Marion	National Lime & Stone Co.	Marion Plant	Grand Prairie, Marion	Vanport limestone (Pennsylvanian) Vanport limestone (Pennsylvanian) Vanport limestone (Pennsylvanian) Vanport limestone (Pennsylvanian)	stone for portland cement manufacture stone for portland cement manufacture crushed stone — unspecified crushed stone — road construction/resurfacing crushed stone — road construction/resurfacing crushed stone — portland cement concrete, asphaltic concrete crushed stone — riprap, railroad ballast, commercial building; aglime crushed stone — riprap, portland cement concrete, road construction/resurfacing; aglime	Mg-608 Mg-EM Mg-631 Mg-54 Mg-L Mn-2 Mn-3 Mn-1
	Tri-County Limestone Co.	Tri-County Limestone Co.	Grand			
	Morrow Gravel Co.	Morrow Gravel/Walls Materials	Dublin			
	Stoneco, Inc.	Celina Quarry	Jefferson			
Miami	Barrett Paving Materials, Inc.	Barrett Paving Materials #139	Union	Lockport & Guelph Dolomites (Silurian) Niagara dolomite (Silurian) Cedarville Dolomite (Silurian) Brassfield Limestone, Dayton & Laurel Dolomites (Silurian)	crushed stone — road construction/resurfacing, commercial building crushed stone — riprap, portland cement concrete, road construction/resurfacing, asphaltic concrete, commercial building; aglime crushed stone — road construction/resurfacing crushed stone — riprap, portland cement concrete, road construction/resurfacing, asphaltic concrete; aglime crushed stone — riprap, road construction/resurfacing, flux, commercial building, extenders/fillers; aglime	Mr-2 Mr-1 Mi-BPM Mi-10
	C. F. Poeppelman, Inc.	C. F. Poeppelman, Inc.	Newberry			
	Piqua Materials, Inc.	Piqua Minerals	Springcreek, Staunton			
	Christman Quarry	Christman Quarry	Franklin, Seneca			
Montgomery	Martin Marietta Aggregates	Dayton Limestone #404 Huber Heights Limestone #344	Madison Wayne	Cedarville Dolomite (Silurian) Brassfield Limestone (Silurian) Cedarville Dolomite (Silurian) upper Brassfield Limestone (Silurian) Maxville Limestone (Mississippian)	crushed stone — road construction/resurfacing crushed stone — road construction/resurfacing; stone for portland cement manufacture crushed stone — riprap, road construction/resurfacing, asphaltic concrete, commercial building, extenders/fillers crushed stone — unspecified; stone for portland cement manufacture crushed stone — riprap, portland cement concrete, road construction/resurfacing, railroad ballast, asphaltic concrete, commercial building, unspecified; aglime	Me-C My-23 My-73 My-1 My-58 Mum-106
	Phillipsburg Limestone #339	Phillipsburg Limestone #339	Clay			
	G-Tract	G-Tract	Wayne			
	East Fultonham	East Fultonham	Newton			
Muskingum	Chesterhill Stone Co.					

¹See also Muskingum County.²Sales only, production at another location.³See also Jefferson County.⁴See also Harrison County.

1999 OHIO DIRECTORY OF LIMESTONE/DOLOMITE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

County	Name of operator	Name of mine or quarry	Township	Geological unit	Type and principal use	State mine number
Muskingum (cont.)	King Limestone, Inc. Pleasant Valley Limestone Sidco Development, Inc. Sidwell Materials	King Limestone, Inc. Pleasant Valley Limestone Sidco Development, Inc. Dupler/Ford White Cottage	Rich Hill Hopewell Newton Newton	Fishpot limestone (Pennsylvanian) Maxville Limestone (Mississippian) Maxville Limestone (Mississippian) Maxville Limestone (Mississippian)	crushed stone — road construction/resurfacing crushed stone — road construction/resurfacing crushed stone — road construction/resurfacing crushed stone — road construction/resurfacing	Cy-309 ^e Mum-907 Mum-SD Mum-SB Mum-104
Noble	King Quarries, Inc. Sharon Stone Co.	King Quarries, Inc. Sharon Stone Co.	Olive Noble, Sharon	Fishpot limestone (Pennsylvanian)	crushed stone — riprap, road construction/ resurfacing crushed stone — riprap, road construction/ resurfacing	Ne-K1 Ne-S
Ottawa	GenLime Inc. Lafarge Corp. Stoneco, Inc. White Rock Quarry, L.P.	GenLime Inc. Marblehead Rocky Ridge Quarry White Rock Quarry, L.P.	Clay Danbury Benton Allen	Niagaran dolomite (Silurian) Columbus Limestone (Devonian) Detroit River Group (Devonian) Guelph Dolomite (Silurian)	crushed stone — riprap, portland cement concrete, road construction/resurfacing, railroad ballast, asphaltic concrete, commercial building, extenders/fillers; lime (burned stone) — building, chemical and industrial crushed stone — riprap, portland cement concrete, road construction/resurfacing, asphaltic concrete, commercial building crushed stone — riprap, portland cement concrete, road construction/resurfacing, asphaltic concrete, commercial building; aglime crushed stone — riprap, portland cement concrete, road construction/resurfacing, asphaltic concrete, commercial building, extenders/fillers, unspecified	Oa-1 Oa-7 Oa-14 Oa-6
Paulding	Hanson Lafarge Corp. Stoneco, Inc.	Hanson Paulding Plant Paulding Quarry Auglaize Quarry	Crane Crane Auglaize	Tenmile Creek Dolomite (Devonian) Dundee Limestone (Devonian) Detroit River Group & Dundee Limestone (Devonian)	crushed stone — unspecified stone for portland cement manufacture crushed stone — riprap, portland cement concrete, road construction/resurfacing, asphaltic concrete, commercial building; aglime	Pg-7 Pg-1 Pg-2
Perry	Maxville Quarries, Inc.	Carpenter Downhour	Monday Creek Monday Creek	Maxville Limestone (Mississippian) Maxville Limestone (Mississippian)	crushed stone — road construction/resurfacing crushed stone — road construction/resurfacing	Py-235 ^e Py-343 ^e
Pickaway	The Melvin Stone Co., LLC	Williamsport Quarry	Perry	Columbus Limestone (Devonian)	crushed stone — riprap, portland cement concrete, road construction/resurfacing, railroad ballast, asphaltic concrete, commercial building	Pky-4
Pike	Latham Limestone, Inc.	Latham Limestone, Inc.	Mifflin	Greenfield Dolomite (Silurian)	crushed stone — riprap, road construction/ resurfacing; aglime	Pke-13
Preble	Wysong Stone Co.	Wysong Stone Co.	Twin	Brassfield Limestone (Silurian)	crushed stone — riprap, road construction/ resurfacing; dimension stone	Pre-5
Putnam	Putnam Stone Co.	Putnam Stone Co.	Pleasant, Riley	Silurian	crushed stone — riprap, portland cement concrete, road construction/resurfacing	Pm-2
Ross	The Melvin Stone Co., LLC	Plano Road Quarry	Concord	Silurian	crushed stone — riprap, portland cement concrete, road construction/resurfacing, railroad ballast, asphaltic concrete, commercial building	Rs-MC1
Sandusky	Gotttron Bros. Co. Martin Marietta Magnesia Specialties, Inc. Millersville Lime Inc.	Gotttron Bros. Co. Woodville Quarry Millersville Plant Woodville Plant	Sandusky Woodville Jackson Woodville	Niagaran dolomite (Silurian) Guelph Dolomite (Silurian) Niagaran dolomite (Silurian) Niagaran dolomite (Silurian)	crushed stone — portland cement concrete, road construction/resurfacing, railroad ballast, commercial building, extenders/fillers crushed stone — unspecified; lime (burned stone) — refractory aglime; lime (burned stone) — chemical and industrial crushed stone — road construction/resurfacing, unspecified; aglime; lime (burned stone) — chemical and industrial, refractory	Sy-5 Sy-1 Sy-4 Sy-3

Seneca	Hanson	Hanson Bloomville Quarry	Bloom	Columbus & Delaware Limestones (Devonian)	crushed stone — unspecified	Sa-3
		Hanson Flat Rock Quarry	Thompson	Columbus & Delaware Limestones (Devonian)	crushed stone — unspecified	Sa-1
	Maple Grove Stone Co.	Maple Grove Stone Co.	Liberty		crushed stone — road construction/resurfacing, asphaltic concrete, commercial building, lime (burned stone) — chemical and industrial	Sa-2
Shelby	North Shore Stone Quarries, Inc.	North Shore Stone Quarries, Inc.	Thompson		crushed stone — commercial building	Sa-8
	Miami River Stone Co.	Miami River Stone Co. Miami River Stone Co.	Washington Orange		crushed stone — riprap, road construction/resurfacing	Shy-16 Shy-17
	Spring Creek Corp.	River Quarry	Clinton		crushed stone — commercial building	Shy-15
Stark	ENZ, Inc.	Sickafoose-Fox Pit	Pike, Sandy	Putnam Hill limestone (Pennsylvanian)	crushed stone — riprap, road construction/resurfacing	Sk-208
Tuscarawas	Belden Brick Co.	Belden Pit Moomaw Pit Shanesville Pit Blue Jay #1 Swonger Pit Kimble Clay & Limestone Co.	Sugar Creek Sugar Creek Sugar Creek Sandy Sandy Dover	Vanport limestone (Pennsylvanian) Vanport limestone (Pennsylvanian) Vanport limestone (Pennsylvanian) Pennsylvanian Pennsylvanian Putnam Hill & Vanport limestones (Pennsylvanian)	crushed stone — riprap crushed stone — riprap crushed stone — riprap crushed stone — riprap crushed stone — riprap crushed stone — riprap, road construction/resurfacing	Ts-1646 Ts-1517 Ts-1939 Ts-BJ Ts-520 Ts-1818
	Sidco Development, Inc.	Midvale	Goshen		crushed stone — road construction/resurfacing	Ts-S2
Union	Shelly Materials, Inc.	Shelly Materials, Inc. Plant #10	Mill Creek	Columbus Limestone (Devonian)	crushed stone — portland cement concrete, road construction/resurfacing, asphaltic concrete, commercial building, unspecified	Un-2
		Shelly Materials, Inc. Plant #11	York		crushed stone — portland cement concrete, road construction/resurfacing, asphaltic concrete, commercial building, unspecified	Un-1
Van Wert	Ridge Township Quarry Stoneco, Inc.	Ridge Township Quarry Scott Quarry	Ridge Union	Tymochtee Dolomite (Silurian)	crushed stone — unspecified crushed stone — riprap, portland cement concrete, road construction/resurfacing, asphaltic concrete, commercial building	Vt-7 Vt-3
	Suever Stone Co., Inc.	Suever Stone Co., Inc.	Washington	Tymochtee Dolomite (Silurian)	crushed stone — portland cement concrete, road construction/resurfacing, asphaltic concrete, commercial building	Vt-1
Vinton	Quality Stone Co.	Route 32	Clinton		crushed stone — unspecified	Vn-193
Wood	Custar Stone Co.	Custar Stone Co.	Milton		crushed stone — riprap, portland cement concrete, road construction/resurfacing, asphaltic concrete	Wd-5
	MacRitchie Materials, Inc.	MacRitchie Materials, Inc.	Perry	Lockport & Salina dolomites (Silurian)	crushed stone — unspecified	Wd-1
	Precision Aggregate, Inc.	Precision Aggregate II	Portage		crushed stone — portland cement concrete, road construction/resurfacing, asphaltic concrete, commercial building	Wd-14
	Stoneco, Inc.	Lime City Quarry	Perrysburg		crushed stone — portland cement concrete, road construction/resurfacing, asphaltic concrete, commercial building; aglime	Wd-6
		Portage Quarry	Portage	Greenfield & Lockport Dolomites (Silurian)	crushed stone — riprap, portland cement concrete, road construction/resurfacing, asphaltic concrete, commercial building; aglime	Wd-11
Wyandot	McCarthy Stone Quarry	McCarthy Stone Quarry	Pitt	Bass Islands Group (Silurian)	crushed stone — road construction/resurfacing, asphaltic concrete	Wt-3
	National Lime & Stone Co.	Carey Plant	Crawford	Lockport Dolomite (Silurian)	crushed stone — riprap, railroad ballast, flux, commercial building, extenders/fillers; aglime; lime (burned stone) — chemical and industrial	Wt-1
	Wyandot Dolomite, Inc.	Wyandot Dolomite, Inc.	Crawford	Greenfield & Lockport Dolomites (Silurian)	crushed stone — riprap, portland cement concrete, road construction/resurfacing, railroad ballast, asphaltic concrete, commercial building; aglime	Wt-8

1999 SAND AND GRAVEL COMPANIES WITH SALES OR PRODUCTION

Company	No. of operations	Sales (tons)	Production (tons)	Company	No. of operations	Sales (tons)	Production (tons)
ATS Enterprises	1	416,832	420,265	Eagle Material	1	248,568	248,568
Agg Rok Materials	1	610,774	610,545	David E. Edgington	1	2,226	2,226
William Albert, Inc.	1	49,799	51,800	Embros, Inc.	1	76,537	76,537
Alden Sand & Gravel Co.	1	19,749	19,749	Enon Washed Sand & Gravel Co.	1	284,103	303,841
Allgeier & Son, Inc.	1	106,000	106,000	Erie Blacktop, Inc.	1	6,406	0
American Excavating, Inc.	1	29,800	34,000	Erie Sand & Gravel Co.	1	7,695	7,695
American Sand & Gravel, Inc.	2	1,195,758	1,195,758	Feikert Sand & Gravel, Inc.	1	114,038	114,038
Apache Aggregate & Paving Co.	2	112,851	160,639	Fenner Sand & Gravel, Inc.	1	104,000	104,000
Ashcraft Sand & Gravel, Inc.	1	52,248	52,248	Fleming Construction Co., Inc.	2	26,119	26,119
Atlas Towing Co.	1	13,917	13,917	Fourman's Sand & Gravel, Inc.	1	70,545	70,545
B & L Sand Co.	1	16,811	16,811	Frye Sand & Gravel, Inc.	2	3,041	3,041
Baker Sand, Inc.	1	747,946	747,946	GANS Ltd.	1	6,658	8,500
Ballentine Excavation Co.	1	1,620	1,620	Ganges Gravel Co.	1	16,164	16,164
Barrett Paving Materials, Inc.	2	704,222	918,679	John L. Garber Materials, Inc.	1	230,368	233,000
Bartley & Bolin Excavating	2	191,506	191,506	Golsch Construction, Inc.	1	10,000	10,000
Beaver Excavating, Inc.	1	5,000	5,000	Joyce A. Good	1	2,581	2,581
Beck Sand & Gravel, Inc.	1	215,978	215,978	Goshen Sand & Gravel	1	41,891	41,891
Paul D. Beery Trucking Co.	1	3,246	0	Green Oaks Potting Products, Inc.	1	38	38
Beverly Slag Co.	1	1,250	1,250	Grimes Excavating	1	184,466	184,466
E. E. Blair Construction Co.	1	125,750	125,750	Harrison Sand & Gravel Co.	1	57,922	50,296
Blue Stone Sand & Gravel, Inc.	1	135,813	137,988	Haubeil & Sons Asphalt & Materials, Inc.	1	137,765	137,765
Gaston Bowling, Inc.	1	5,337	5,337	Haueter Sand & Gravel, Inc.	1	153,740	153,740
D. H. Bowman & Sons, Inc.	1	49,357	54,982	Heer Excavating, Inc.	1	35,926	35,926
Boyd Excavating	1	9,713	9,713	Heiser Sand & Gravel Corp.	1	30,064	30,064
Briggs Sand & Gravel, Inc.	1	7,695	7,695	Hilltop Aggregate, Inc.	1	345,799	345,799
Broshear Contractors, Inc.	1	250	250	Hilltop Basic Resources, Inc.	2	1,477,460	1,241,751
Gary L. Brown	1	242	242	Hocking Valley Concrete, Inc.	1	70,437	87,000
Karl Brugmann Sand & Gravel, Inc.	1	61,562	61,562	Hocking Valley Mulch	1	3,486	3,486
Oscar Brugmann Sand & Gravel, Inc.	1	537,496	585,000	William A. Hoffman, Jr.	1	3,072	3,072
Buckeye Excavating Development, Inc.	1	25,909	25,909	Hugo Sand Co.	1	261,732	261,732
James Bunnell, Inc.	3	1,003,867	1,003,867	Inland South Aggregates	1	141,470	141,470
Joe E. Carter	1	400	400	JBM Ltd.	1	179,433	179,433
Carter & Carter, Inc.	1	2,714	3,300	JP Sand & Gravel Co.	1	414,966	414,966
Central-Allied Enterprises, Inc.	4	1,288,539	1,288,539	Jarrett Sand Co.	1	3,318	3,318
Chesterhill Stone Co.	2	366,806	364,454	Jaymar, Inc.	1	29,021	29,021
Chesterville Sand & Gravel Co., Inc.	1	176,471	176,471	Jefferson Materials Co.	1	426,958	426,958
Clemson Excavating, Inc.	1	67,723	67,723	Van Johnson Construction, Inc.	1	1,523	1,523
M. J. Coates Construction Co.	2	153,627	153,627	Joseph Sand & Gravel, Inc.	1	3,520	3,520
Cochran Transportation Services, Inc.	1	28,690	36,690	Kilbarger Construction, Inc.	1	14,069	14,069
Boone Coleman Construction, Inc.	1	1,032	1,532	Kinsman Sand & Gravel Co.	1	67,731	67,731
Bill D. Colwell	1	41,198	41,198	Kipp's Gravel Co., Inc.	1	115,728	115,728
Complete Resources Co.	1	251,546	197,652	Kirby's Sand & Gravel, Inc.	1	141,349	141,349
County Line Concrete & Supply Co.	1	109,264	0	T & K Kuhnle Co.	1	59,041	59,041
Donald A. Coy	1	9,900	9,900	L & I Natural Resources, Inc.	1	111,930	111,930
Craigton Shale Co.	1	90,972	90,972	L & M Mineral Co.	1	12,660	12,660
Crosby Gravel	1	54,225	54,225	Lafarge Corp.	2	840,080	844,258
R. A. Cruise Sand & Gravel, Inc.	1	46,401	46,401	Lake Hope Asphalt, Inc.	1	27,039	55,104
D & K Materials, Inc.	1	23,944	23,944	Lakeside Sand & Gravel Co.	1	384,944	384,944
D & W Sand & Gravel	1	7,143	7,143	LaMar Sand & Fill, Ltd.	1	4,887	4,887
D.B.M. Materials, LLC	1	63,645	70,540	Leonard Sand & Gravel	1	200	200
D.G.M., Inc.	1	2,432	2,432	Letart Corp.	1	77,955	77,955
Darby Creek Excavating	1	9,000	9,000	Link Trucking Co.	1	38,535	39,950
Davon, Inc.	2	819,710	828,249	Little Miami Sand & Gravel	2	0	4,000
Demmy Construction, Inc.	1	19,680	19,680	Loxley Aggregates, Inc.	1	2,157	2,157
Demmy Sand & Gravel	1	5,671	5,671	Lucky Sand & Gravel Co.	1	101,939	101,939
Dingledine Basic Materials, Inc.	1	83,883	83,883	Al Mackey Enterprises, Inc.	1	54,248	54,248
Don's Dozer Service, Inc.	1	3,557	3,557	R.J. Martin Service & Excavating	1	590	590
James E. Downard	1	3,205	3,205	Martin Marietta Aggregates	15	11,376,068	10,785,818
C. E. Duff & Son, Inc.	3	11,124	11,124	Mason's Sand & Gravel Co.	1	76,525	76,525
E. A. Construction, Inc.	1	1,213	1,213	Massillon Materials, Inc.	3	570,070	570,070

1999 SAND AND GRAVEL COMPANIES WITH SALES OR PRODUCTION

Company	No. of operations	Sales (tons)	Production (tons)	Company	No. of operations	Sales (tons)	Production (tons)
Mathews Sand & Gravel	1	940	940	Joe Simak & Sons Trucking, Inc.	3	37,404	37,404
Mecco, Inc.	1	311,983	273,783	Sleepy Hollow Sand & Gravel	1 ¹	5,671	5,671
Mechanicsburg Sand & Gravel, Inc.	1	237,544	237,544	Small's Sand & Gravel, Inc.	4	271,866	271,866
Meigs County Commissioners	1	19,850	19,850	Sober Sand & Gravel Co.	1	37,151	37,151
The Melvin Stone Co., LLC	1	253,550	321,147	Soehnlen Bros. Sand & Gravel, Inc.	1	111,493	111,493
Menuez Bros. Sand & Gravel, Inc.	1	226,819	244,823	Solomon's Mines, Inc.	2	114,376	114,376
Miami River Stone Co.	1	107,452	141,869	Solon Excavators Sand & Gravel, Inc.	2	331,176	331,176
Miami View Mining Co., Ltd	1	579,987	579,987	Soltis Sand & Gravel	1	3,078	3,500
Miller Bros. Gravel, Inc.	1	265,583	267,247	South Central Sand & Gravel	1	73,844	73,844
Miller Sand & Gravel, Inc.	1	3,611	3,611	Spring Creek Corp.	2	512,478	512,478
Moon Enterprises, Inc.	1	0	50	Spring Run Gravel	1	14,598	14,598
Moore's Excavating Co.	3	65,888	65,888	Stewart & Reichman, Inc.	1	78,528	78,528
Moraine Materials Co., Inc.	2	518,485	518,485	Stocker Sand & Gravel Co.	2	1,327,646	1,327,646
Morrow Gravel Co.	2	459,504	459,504	Stoneco, Inc.	1	395,000	394,000
Muskingum River Gravel Co.	4	692,121	699,197	Sunshine Sand Co.	1	1,843	1,843
National Aggregates, Inc.	1	339,725	339,725	Tackett Builders	1	800	800
National Lime & Stone Co.	3	548,208	532,434	Teague Gravel Co., Inc.	1	51,198	51,198
Neer's Sand & Gravel	1	132,101	116,399	Thiel Construction Co.	1	7,239	7,239
Nelson Sand & Gravel, Inc.	2	72,480	72,480	Tipp Stone Co., Inc.	2	60,085	60,085
New Carlisle Sand & Gravel Co.	1	14	14	Tri-State Asphalt Products	1	5,256	0
Newbury Sand & Gravel	1	50,507	50,507	Trout Sand & Gravel Co.	1	31,323	48,324
Newton Asphalt Paving, Inc.	1	164,508	164,508	Tuffco Sand & Gravel, Inc.	1	175,133	175,133
Nick's Trucking	1	2,180	2,180	Twinsburg Development Corp	1	100,051	100,051
Andy Nixon Contractors, Inc.	1	23,821	23,821	U.S. Aggregates	1	239,500	267,500
Northern Ohio Paving Co.	1	496,800	496,800	Valley Materials Co.	1	71,124	33,309
Carl E. Oeder & Sons Sand & Gravel	1	548,212	548,212	Van Wey Sand & Gravel, Inc.	1	804,641	831,000
Olen Corp.	4	3,726,000	4,300,000	Wallace Road Sand & Gravel	1	7,800	7,800
Oneida Sand & Gravel, Inc.	1	87,379	87,379	Ward Materials, Inc.	1	36,158	36,158
Osborne Materials Co.	1	89,932	89,932	Don Wartko Construction, Inc.	1	503	503
Oster Sand & Gravel, Inc.	3	1,068,968	1,068,968	Watson Gravel, Inc.	4	2,435,203	2,402,714
Ours Sand & Gravel	1	3,009	3,009	Weber Sand & Gravel, Inc.	1	269,727	269,727
Penry Stone Co.	1	14,883	14,883	Joann O. Weddle	1	9,858	9,858
Phillips Sand & Gravel	1	441,547	441,547	Welch Sand & Gravel, Inc.	3	1,217,891	1,217,891
Powell Gravel & Topsoil, Inc.	2	900,989	900,989	Willowbrook	1	24,140	24,140
Power Development Corp.	1	5,000	5,000	Gene T. Wilson	1	624	624
Prairie Lane Sand & Gravel Co.	1	205,124	205,124	Wise Gravel	1	1,028	1,028
Precision Aggregate, Inc.	1	99,806	99,806	Wylie and Sons Landscaping	3	87,665	87,665
Quality Ready Mix, Inc.	1	47,850	51,050	Wysong Gravel Co.	2	263,447	263,447
Rainbow Sand & Gravel, Inc.	1	116,850	116,850	X L Sand & Gravel	1	60,814	60,814
Red Brush Peat Co.	1	25,232	25,232	Xenia Sand, Gravel, & Asphalt Co.	1	250	250
Redskin Transport LLC	1	13,703	6,000	Young's Sand & Gravel Co.	3	351,270	351,270
Riverside Sand & Gravel Co., Inc.	1	3,602	3,602	Zollinger Sand & Gravel Co.	1	45,893	45,893
Gary Roberts Excavating	1	460	460	TOTAL: 223 companies	305	59,809,555	59,922,549
Rockwell Sand & Gravel, Inc.	1	256,422	256,422				
Rupp Construction, Inc.	1	442,381	442,381				
S & S Aggregate, Inc.	4	528,696	525,767				
S & S Transport, Inc.	1	201,079	201,079				
Samco, Inc.	1	323,620	323,620				
Sandman Trucking, Inc.	2	201,740	201,740				
Sant Sand & Gravel, Inc.	1	180,795	235,500				
Guy Schieve	1	6,750	6,750				
Schloss Materials Co.	1	209,824	209,824				
Mark E. Scott	1	50,000	50,000				
Seaway Sand & Stone, Inc.	1	37,878	37,878				
Seville Sand & Gravel, Inc.	1	178,100	178,100				
Shady Bend Sand & Gravel	1	123,786	123,786				
Shamrock Materials, Inc.	1	660,741	660,741				
Shelly Materials, Inc.	9	4,049,066	4,048,527				
Sidco Development, Inc.	1	78,749	78,749				
R. W. Sidley, Inc.	2	140,134	156,880				

¹This mine was operated by Redskin Transport LLC from June through December 1999 and is not included in the total number of mines.



Aerial view of the Ostrander quarry, processing plant, and asphalt plant in Union County operated by Shelly Materials, Inc. (Plant #10), circa 2000. View is to the west. Photo courtesy of Scott Wilson, Shelly Materials, Inc.

1999 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

For those mines that have not been assigned a state mine number, a letter designation is used (example: Ald-G).

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Allen	Ward Materials, Inc.	Ward Materials, Inc.	Monroe	sand — fill, landscaping gravel — filtration, fill, landscaping	An-15
Ashland	Bartley & Bolin Excavating	Bartley & Bolin, Inc. Plant #2	Mohican	sand — building gravel — building, fill	Ald-9
	Joyce A. Good	Joyce A. Good	Jackson Green	gravel — bank run sand — building, road construction/resurfacing, unspecified	Ald-G
	Young's Sand & Gravel Co.	Norman Sprang	Green	gravel — building, road construction/resurfacing, unspecified	Ald-7
		Ayers	Green	sand — building, road construction/resurfacing, unspecified	Ald-15
		Chuck Spreng	Green	gravel — building, road construction/resurfacing, unspecified	Ald-Y
Ashtabula	Clemson Excavating, Inc.	Clemson	Hartsgrove	gravel — road construction/resurfacing	Asa-C
	Frye Sand & Gravel, Inc.	Frye Sand & Gravel, Inc.	Denmark	gravel — bank run	Asa-10
	Joe Simak & Sons Trucking, Inc.	Frye Sand & Gravel, Inc. Amboy Pit Baird Pit	Monroe Kingsville Conneaut	gravel — bank run sand — building, fill sand — building	Asa-F Asa-ST Asa-JS
		North Ridge Pit	Kingsville	gravel — building	Asa-18
	Kinsman Sand & Gravel Co.	Kinsman Sand & Gravel Co.	Wayne	sand — building gravel — building	Asa-20
	Mathews Sand & Gravel	Mathews Sand & Gravel	North Kingsville	sand — unspecified gravel — building	Asa-M
	Nelson Sand & Gravel, Inc.	Nelson Sand & Gravel, Inc.	Kingsville	sand — building gravel — building	Asa-12
		Nelson Sand & Gravel, Inc.	North Kingsville	sand — building	Asa-N
	R. W. Sidley, Inc.	Sidley-Kingsville Pit	Kingsville	gravel — building gravel — building	Asa-15
Athens	Cochran Transportation Services, Inc.	Circle Hill Sand & Gravel, Inc.	Dover	sand — building gravel — building	As-595
	Lake Hope Asphalt, Inc.	Lake Hope Asphalt, Inc.	York	sand — asphaltic concrete, unspecified gravel — asphaltic concrete, unspecified	As-1161
	Olen Corp.	Stewart Plant #4	Rome	sand — portland cement concrete, road construction/resurfacing gravel — building, road construction/resurfacing	As-W
Auglaize	Joseph Sand & Gravel, Inc. National Lime & Stone Co.	Joseph Sand & Gravel, Inc. Wapakoneta Plant	Union Union	gravel — fill sand — building, portland cement concrete gravel — portland cement concrete	Ae-23 Ae-30
	Quality Ready Mix, Inc.	Quality Ready Mix, Inc.	Pusheta	sand — portland cement concrete gravel — portland cement concrete	Ae-16
Belmont	Tri-State Asphalt Products	Tri-State Asphalt Products	Meade	asphaltic concrete	Bt-74
Butler	Gaston Bowling, Inc. Broshear Contractors, Inc.	Indian Creek Sand & Gravel Ross Twp. Gravel	Ross Ross	gravel — building, unspecified sand — unspecified	Bt-40 Bt-48
	Bill D. Colwell	Bill D. Colwell	St. Clair	gravel — building	Bt-36
	Dingledine Basic Materials, Inc.	Dingledine Basic Materials, Inc.	Milford	sand — asphaltic concrete, fill gravel — building, road construction/resurfacing, filtration, fill	Bt-50
	Martin Marietta Aggregates	Fairfield Gravel #187	Fairfield, Ross	gravel — portland cement concrete, asphaltic concrete, road construction/resurfacing, industrial sand construction/resurfacing, road	Bt-35

1999 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Butler (cont.)	Martin Marietta Aggregates (cont.)	Hamilton #186	St. Clair	sand — portland cement concrete, asphaltic concrete, road construction/resurfacing, industrial sand	Br-5
		Ross S & G #457	Ross	gravel — portland cement concrete, asphaltic concrete, road construction/resurfacing, landscaping	Br-29
	Mecco, Inc.	Mecco, Inc.	Lemon	sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, industrial sand	Br-15
	Moraine Materials Co., Inc.	Middletown	Madison	gravel — portland cement concrete, asphaltic concrete, road construction/resurfacing	Br-6
	Shamrock Materials, Inc.	Shamrock Materials, Inc.	Madison	sand — unspecified	Br-52
Carroll	Watson Gravel, Inc.	Watson Pit	Fairfield	sand — building, portland cement concrete, road construction/resurfacing	Br-47
		River Pit	Fairfield	gravel — building, portland cement concrete, asphaltic concrete, fill	Br-57
	Welch Sand & Gravel, Inc.	Schlichter Pit	Fairfield	sand — building	Br-38
	Oneida Sand & Gravel, Inc.	Oneida Sand & Gravel, Inc.	Brown	gravel — building, asphaltic concrete	Cl-204
	Power Development Corp.	Robertson	Brown	sand — road construction/resurfacing	Cl-PD
Champaign	D & W Sand & Gravel	D & W Sand & Gravel	Union	gravel — road construction/resurfacing	Cpn-21
	Mechanicsburg Sand & Gravel, Inc.	Mechanicsburg Sand & Gravel, Inc.	Union	sand — unspecified	Cpn-22
	Moore's Excavating Co.	Moore's Excavating Co.	Salem	gravel — unspecified	Cpn-20
		Moore's Excavating Co.	Wayne	sand — building	Cpn-25
	Morrow Gravel Co.	Urbana Materials	Urbana	gravel — building	Cpn-1
Clark	American Excavating, Inc.	American Excavating, Inc.	Bethel	sand — building, portland cement concrete	Ck-A
	Barrett Paving Materials, Inc.	Barrett Paving Materials, Inc.	Mad River	gravel — road construction/resurfacing, pipe bedding	Ck-28
	Demmy Construction, Inc.	Demmy Construction, Inc.	Mad River	sand — unspecified	Ck-501
	Demmy Sand & Gravel	Demmy Sand & Gravel	Mad River	gravel — unspecified	Ck-502
	Enon Washed Sand & Gravel Co.	Enon Washed Sand & Gravel Co.	Bethel	sand — pipe fill	Ck-3
Clermont	Martin Marietta Aggregates	Fairborn Gravel #333	Bethel	sand — building	Ck-13
				gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, industrial sand	
	Moore's Excavating Co.	Moore's Excavating Co.	Moorefield	road construction/resurfacing	Ck-29
	Shelly Materials, Inc.	Shelly Materials, Inc. Plant #3	Springfield	gravel — building	Ck-25
	Barrett Paving Materials, Inc.	Barrett Paving Materials-Perintown	Union	sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, fill, unspecified	
				gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration, unspecified	
				sand — unspecified	Ct-9
				gravel — unspecified	

Columbiana	Kipp's Gravel Co., Inc.	Kipp's Gravel Co., Inc.	Stonelick	sand — unspecified gravel — unspecified	Ct-7
	Inland South Aggregates	Inland South Aggregates	Middleton	sand — bedding gravel — bedding	Ca-351
	Solomon's Mines, Inc.	Solomon's Mines, Inc.	Salem	sand — building, road construction/resurfacing, fill	Ca-S ¹
	Willowbrook	Willowbrook	Elkrum	gravel — building, road construction/resurfacing, filtration	Ca-993
	X L Sand & Gravel	X L Sand & Gravel	Middleton	sand — unspecified gravel — unspecified sand — building gravel — building	Ca-881
Coshocton	William Albert, Inc.	William Albert, Inc.	Franklin	sand — building, road construction/resurfacing, unspecified	Cn-828
	Apache Aggregate & Paving Co.	Apache Aggregate & Paving Co.	Jackson	gravel — building, road construction/resurfacing, filtration, unspecified	Cn-718
	County Line Concrete & Supply Co.	Apache Aggregate & Paving Co. County Line Concrete & Supply Co.	Keene Oxford	sand — portland cement concrete, asphaltic concrete gravel — portland cement concrete, asphaltic concrete, road construction/resurfacing	Cn-783 Cn-C
	Shady Bend Sand & Gravel	Shady Bend Sand and Gravel	Oxford	gravel — road construction/resurfacing	Cn-624
	Shelly Materials, Inc.	Shelly Materials, Inc. Plant #5	Bethlehem	sand — road construction/resurfacing gravel — road construction/resurfacing sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, fill, unspecified	Cn-694
Darke	Fourman's Sand & Gravel, Inc.	Fourman's Sand & Gravel, Inc.	Greenville	gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration, unspecified	Dke-4
Erie	Jarrett Sand Co.	Jarrett Sand Co.	Groton	sand — building gravel — building	Ee-29
Fairfield	Paul D. Beery Trucking Co.	Paul D. Beery Trucking Co.	Berne	sand — fill	Fd-14
	James E. Downard	Downard Pit	Rush Creek	sand — unspecified gravel — unspecified	Fd-16
	Van Johnson Construction, Inc.	Molly Johnson Mining	Berne	sand — backfill sand — building	Fd-VJ
	Shelly Materials, Inc.	Shelly Materials, Inc. Plant #14	Berne	gravel — building sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, fill, unspecified	Fd-13
	Agg Rok Materials	Agg Rok Materials	Franklin	gravel — building, portland cement concrete, asphaltic concrete, fill	Fn-36
Franklin	D.B.M. Materials, LLC	D.B.M. Materials, LLC	Hamilton, Madison	gravel — building, asphaltic concrete	Fn-14
	JP Sand & Gravel Co.	JP Sand & Gravel Co.	Hamilton	sand — road construction/resurfacing gravel — building, road construction/resurfacing	Fn-52
	Martin Marietta Aggregates	Columbus #319	Marion	sand — building gravel — building	Fn-6
	Mason's Sand & Gravel Co.	Lockbourne #213	Hamilton	sand — building, asphaltic concrete gravel — building, portland cement concrete, asphaltic concrete, construction	Fn-23
	Olen Corp.	Mason's Sand & Gravel Co.	Hamilton	sand — portland cement concrete, asphaltic concrete, construction	Fn-11
Fulton	Sandman Trucking, Inc.	Columbus Plant #3	Hamilton	sand — building gravel — building	Fn-58
	Wylie and Sons Landscaping	Sandman Trucking, Inc. M. & K. Knapp R. K. Walters	Swan Creek	sand — building, portland cement concrete, asphaltic concrete gravel — building, portland cement concrete, asphaltic concrete	Ftn-SA Ftn-WY Ftn-W
	Jaymar, Inc.	Jaymar, Inc.	Swan Creek	sand — building sand — building	
Gallia	Ours Sand & Gravel	Ours Sand & Gravel	Addison Ohio	sand — building sand — building	Ga-J Ga-O

¹Information for Ca-S includes information for Mg-632.

1999 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Geauga	Haueter Sand & Gravel, Inc.	Haueter Sand & Gravel	Burton, Newbury	sand — building, portland cement concrete	Gea-29
	T & K Kuhnle Co.	Munn Rd. Sand & Gravel	Auburn	gravel — filtration, oversize sand — unspecified	Gea-TK
	Newbury Sand & Gravel	Newbury Sand & Gravel	Burton, Newbury	gravel — unspecified	Gea-N
	Solon Excavators Sand & Gravel, Inc.	May	Auburn	sand — building, asphaltic concrete	Gea-43
	Soltis Sand & Gravel	Soltis Sand & Gravel	Parkman	sand — building	Gea-9
Greene	Teague Gravel Co., Inc.	Teague Gravel Pit	Newbury	gravel — building	Gea-35
	M. J. Coates Construction Co.	M. J. Coates Construction Co.	Spring Valley	gravel — bank run	
	Hilltop Basic Resources, Inc.	M. J. Coates Construction Co.	Spring Valley	sand — building, portland cement concrete, fill	
	Martin Marietta Aggregates	Fairborn Aggregate Plant	Bath	gravel — building, portland cement concrete, fill	
		Spring Valley Gravel #346	Spring Valley	sand — building, portland cement concrete, asphaltic concrete, industrial sand	Ge-42
		Spring Valley North #593	Spring Valley	gravel — portland cement concrete, asphaltic concrete, road construction/resurfacing, landscaping	Ge-38
		Xenia Gravel #337	Beaver Creek	sand — portland cement concrete, asphaltic concrete, road construction/resurfacing, industrial sand	Ge-33
	R. J. Martin Service & Excavating	Donald Martin Contracting	Spring Valley	gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Ge-40
	Phillips Sand & Gravel	Phillips Sand & Gravel	Beaver Creek	gravel — pit run	Ge-36
	Joann O. Weddle	S & W	Xenia	sand — unspecified	Ge-W
Hamilton	Xenia Sand, Gravel, & Asphalt Co.	Xenia Sand & Gravel, Ltd.	Xenia	gravel — unspecified	Ge-10
	Allgeier & Son, Inc.	Pit 1	Miami	gravel — fill	Hmn-AS1
	Ashcraft Sand & Gravel, Inc.	Ashcraft Sand & Gravel, Inc.	Whitewater	sand — building	Hmn-54
	James Bunnell, Inc.	James Bunnell, Inc.	Harrison	gravel — building	Hmn-50
	James Bunnell, Inc.	James Bunnell, Inc.	Whitewater	sand — unspecified	Hmn-59
	James Bunnell, Inc.	James Bunnell, Inc.	Whitewater	gravel — unspecified	Hmn-B
	Lost Bridge	Lost Bridge	Whitewater	sand — unspecified	Hmn-JC
	Crosby Gravel	Crosby Gravel	Crosby	sand — building	Hmn-44
	Golsch Construction, Inc.	Golsch	Whitewater	gravel — building	Hmn-G
	Harrison Sand & Gravel Co.	Harrison Sand & Gravel Co.	Harrison	sand — unspecified	Hmn-17
				sand — building, portland cement concrete, asphaltic concrete, ice control	
				gravel — building, portland cement concrete, road construction/resurfacing, filtration	
	Leonard Sand & Gravel	Leonard Sand & Gravel	Crosby	sand — unspecified	Hmn-67
	Martin Marietta Aggregates	Camp Dennison #455	Symmes	gravel — unspecified	Hmn-5
		Harrison Gravel #188	Harrison	sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, fill, industrial sand	
				gravel — portland cement concrete, asphaltic concrete, road construction/resurfacing	
				sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, industrial sand	
				gravel — portland cement concrete, asphaltic concrete, road construction/resurfacing, landscaping	Hmn-37

		Miamitown #193	Crosby, Whitewater		
	Powell Gravel & Topsoil, Inc.	Powell Gravel & Topsoil, Inc.	Miami	sand — portland cement concrete, road construction/resurfacing gravel — portland cement concrete	Hmn-D
	Watson Gravel, Inc.	Powell Gravel & Topsoil, Inc. Dry Fork Rd. S & G #138 Harrison Pit	Whitewater	sand — portland cement concrete, asphaltic concrete, fill gravel — building, road construction/resurfacing	Hmn-P
	Welch Sand & Gravel, Inc.	East Miami Pit Fernald Pit	Whitewater	sand — portland cement concrete, asphaltic concrete, fill gravel — building, road construction/resurfacing	Hmn-71
			Colerain	sand — road construction/resurfacing gravel — building, portland cement concrete, asphaltic concrete, fill construction/resurfacing	Hmn-68 Hmn-60
			Crosby	sand — building gravel — building sand — building gravel — building	Hmn-48 Hmn-42
Highland	LaMar Sand & Fill, Ltd.	LaMar Pit	New Market	gravel — bank run	Hd-L
Hocking	Hocking Valley Concrete, Inc.	Hocking Valley Concrete, Inc.	Green	sand — portland cement concrete, fill, concrete block gravel — portland cement concrete, road construction/resurfacing, fill	Hg-262
	Hocking Valley Mulch	Sheets Pit	Falls	sand — fill gravel — fill	Hg-HV
	Kilbarger Construction, Inc.	Kilbarger Gravel Pit	Falls	sand — unspecified gravel — unspecified	Hg-329
	Muskingum River Gravel Co.	S & S Aggregate #8	Green, Starr	sand — asphaltic concrete, road construction/resurfacing, unspecified gravel — asphaltic concrete, road construction/resurfacing, unspecified	Hg-301
Holmes	Craigton Shale Co.	Lakeville Sand & Gravel	Washington	sand — portland cement concrete gravel — building	Hs-C
	Feikert Sand & Gravel, Inc.	Feikert Sand & Gravel, Inc.	Salt Creek	sand — building, portland cement concrete, road construction/resurfacing gravel — building, portland cement concrete, road construction/resurfacing	Hs-511
	Menuuez Bros. Sand & Gravel, Inc.	Menuuez Bros. Sand & Gravel, Inc.	Hardy	sand — portland cement concrete, fill, ice control gravel — portland cement concrete, road construction/resurfacing, filtration	Hs-82
	S & S Transport, Inc.	Patterson	Prairie	sand — portland cement concrete, asphaltic concrete, road construction/resurfacing, fill gravel — building, asphaltic concrete, road construction/resurfacing, filtration	Hs-J
	Spring Run Gravel	Spring Run Gravel	Killbuck	sand — unspecified gravel — unspecified	Hs-96
Huron	Erie Blacktop, Inc.	Erie Blacktop, Inc.	Norwalk	sand — building	Hm-16
Knox	Olen Corp.	Fredericktown Plant #2	Morris	sand — portland cement concrete, asphaltic concrete gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Kx-16
	Sant Sand & Gravel, Inc.	Sant Sand & Gravel, Inc.	Clinton	sand — building gravel — building, road construction/resurfacing	Kx-3
	Small's Sand & Gravel, Inc.	Small's Sand & Gravel, Inc. Small's Sand & Gravel, Inc.	Howard Harrison	gravel — unspecified sand — unspecified	Kx-S Kx-15
		Small's Sand & Gravel, Inc. Small's Sand & Gravel, Inc.	Harrison Union	gravel — unspecified gravel — unspecified	Kx-17 Kx-5
Lake	R. W. Sidley, Inc.	Painesville Plant	Painesville	sand — fill	Lke-7
Lake Erie	Erie Sand & Gravel Co. Osborne Materials Co.	Erie Sand & Gravel Co. Osborne Materials Co.	Vermilion-Lorain area "A" Fairport	sand — building, sand — building, portland cement concrete, asphaltic concrete, fill	Eedredge Ledredge
Lawrence	B & L Sand Co.	B & L Sand Co.	Perry	sand — industrial sand	Le-430

1999 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Licking	Eagle Material	Eagle Material Supply	St. Albans	sand — portland cement concrete, asphaltic concrete gravel — building, asphaltic concrete, road construction/resurfacing, filtration, ice control, utilities	Lg-W
	Olen Corp.	St. Louisville Plant #5	Washington	sand — portland cement concrete, asphaltic concrete, road construction/resurfacing	Lg-31
	Redskin Transport LLC	Sleepy Hollow Pit	Madison	sand — building	Lg-S ²
	Gary Roberts Excavating	Gary Roberts Excavating	Madison	gravel — building	Lg-504
	Sleepy Hollow Sand & Gravel	Sleepy Hollow Sand & Gravel	Madison	gravel — driveways	Lg-S ²
Logan	Van Wey Sand & Gravel, Inc.	Van Wey Sand & Gravel, Inc.	Newton	sand — building	Lg-10
	Boyd Excavating	Boyd Excavating	Monroe	gravel — building	Lgn-B
	C. E. Duff & Son, Inc.	C. E. Duff & Son, Inc.	Lake Washington	sand — portland cement concrete	Lgn-36
	Neer's Sand & Gravel	Duff Sand Co.	Washington	sand — fill	Lgn-39
		Neer's Sand & Gravel	Union	sand — building, portland cement concrete	Lgn-31
Lorain	Guy Schieve	Guy Schieve Pit	Henrietta	sand — unspecified	Lgn-6
	Al Mackey Enterprises, Inc.	Al Mackey Enterprises, Inc.	Springfield	sand — building	Ln-12
	Gary L. Brown	Gary L. Brown	Springfield	sand — building	Ls-AM
	Moon Enterprises, Inc.	Moon Enterprises, Inc.	Springfield	sand — unspecified	Ls-GB
	Sandman Trucking, Inc.	Sandman Trucking, Inc.	Springfield	sand — building	Ls-ME
Madison	Seaway Sand & Stone, Inc.	Seaway Sand & Stone, Inc.	Swanton	sand — building	Ls-ST
	Wylie and Sons Landscaping	L. Diller	Springfield	sand — building, construction	Ls-13
	Tuffco Sand & Gravel, Inc.	Tuffco Sand & Gravel, Inc.	Darby	sand — building	Ls-WY
				sand — portland cement concrete, road construction/resurfacing, fill	Mdn-11
				gravel — building, driveways	
Mahoning	Wallace Road Sand & Gravel	Wallace Road Sand & Gravel	Springfield	sand — fill	Mg-630
	Fleming Construction Co., Inc.	Pit #1	Prospect	sand — portland cement concrete, mason & farm	Mn-16
		Pit #2	Prospect	gravel — fill, landscaping	Mn-19
	Perry Stone Co.	Prospect Plant	Prospect	sand — fill	Mn-4
	Shelly Materials, Inc.	Shelly Materials, Inc. Plant #12	Prospect	sand — building	Mn-10
Medina	Baker Sand, Inc.	Baker Sand, Inc.	Harrisville, Westfield	gravel — building, fill, unspecified	Ma-20
	Seville Sand & Gravel, Inc.	Seville Sand & Gravel, Inc.	Harrisville, Westfield	sand — building, portland cement concrete gravel — road construction/resurfacing	Ma-22
	Letart Corp.	Plant #4	Olive	sand — building, asphaltic concrete, fill	Ms-308
				gravel — building, road construction/resurfacing, filtration	
				sand — building, portland cement concrete, asphaltic concrete, mason sand	
Meigs	Martin Marietta Aggregates	Apple Grove Plant	Letart	gravel — portland cement concrete, asphaltic concrete, road construction/resurfacing	Ms-205
	Meigs County Commissioners	Meigs County Pit	Letart	sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, fill	
				gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration	
				sand — asphaltic concrete, road construction/resurfacing	Ms-301
				gravel — asphaltic concrete, road construction/resurfacing	

	Shelly Materials, Inc.	Shelly Materials Inc. Plant #6	Letart	
Miami	Fenner Sand & Gravel, Inc.	Woodville Concrete Corp.	Newton	Ms-298 sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, fill, unspecified gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration, unspecified
	Martin Marietta Aggregates	Troy Gravel #345	Concord	Mi-4 sand — unspecified gravel — unspecified
	New Carlisle Sand & Gravel Co.	New Carlisle Sand & Gravel Co.	Bethel	Mi-3 sand — building, portland cement concrete, asphaltic concrete, industrial sand gravel — portland cement concrete, asphaltic concrete, road construction/resurfacing, landscaping
	Shelly Materials, Inc.	Shelly Materials, Inc. Plant #22	Union	Mi-501 sand — fill gravel — fill
	Tipp Stone Co., Inc.	Troy	Elizabeth	Mi-504 sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, fill, unspecified gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration, unspecified
Montgomery	Wise Gravel	Wise Gravel	Newberry	Mi-12 sand — fill gravel — fill
	Carter & Carter, Inc.	Carter & Carter, Inc.	Miami	Mi-9 gravel — unspecified
	Hilltop Basic Resources, Inc.	West Carrollton Aggregate Plant	Jefferson, Miami	My-CW My-19 sand — building, road construction/resurfacing gravel — building, portland cement concrete, asphaltic concrete, golf course
	Miller Bros. Gravel, Inc.	Miller Bros. Gravel, Inc.	Butler	My-52 sand — building, portland cement concrete, asphaltic concrete, fill ice control
	Moraine Materials Co., Inc.	German town	German	My-41 gravel — building, portland cement concrete, road construction/resurfacing, filtration, unspecified
Morgan	Tipp Stone Co., Inc.	Meeker	Butler	My-61 sand — unspecified gravel — unspecified sand — fill gravel — fill
	Chesterhill Stone Co.	Buck Farm	Windsor	Mon-588 sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, fill gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration
	Link Trucking Co.	Link Trucking Co.	Bloom	Mon-L sand — portland cement concrete, fill gravel — building, portland cement concrete, road construction/resurfacing, filtration, unspecified
	Chesterville Sand & Gravel Co., Inc.	Chesterville Sand & Gravel Co., Inc.	Chester	Mw-10 sand — building, fill gravel — building, road construction/resurfacing, filtration, landscaping, ice control
	Muskingum River Gravel Co.	S & S Aggregate #1	Wayne	Mum-228 sand — building, asphaltic concrete, road construction/resurfacing, unspecified gravel — building, asphaltic concrete, road construction/resurfacing, unspecified
Morrow	Shelly Materials, Inc.	Shelly Materials, Inc. Plant #9	Cass	Mum-799 ² sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, fill, unspecified gravel — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration, unspecified
	Complete Resources Co.	Darby Materials Plant #5	Darby	Fn-C sand — portland cement concrete, road construction/resurfacing gravel — building, asphaltic concrete
	Darby Creek Excavating	Darby Creek Excavating	Muhlenburg	Pky-DC sand — utility fill gravel — utility fill
	William A. Hoffman, Jr.	Hoffman Pit	Wayne	Pky-H sand — fill gravel — fill
	The Melvin Stone Co., LLC	Richards Farms	Circleville, Wayne	Pky-R sand — building, portland cement concrete, asphaltic concrete gravel — building, asphaltic concrete, road construction/resurfacing

²This mine was operated January through May 1999 by Sleepy Hollow Sand & Gravel and June through December 1999 by Redskin Transport LLC.
³Information for Mum-799 includes information for Mum-863.

1999 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Pickaway (cont.)	Gene T. Wilson	Wilson Pit	Darby	sand — unspecified gravel — unspecified	Pky-W
	Davon, Inc.	Piketon Sand & Gravel	Scioto	sand — unspecified gravel — unspecified	Pke-24
	South Central Sand & Gravel	South Central Sand & Gravel	Scioto	sand — portland cement concrete gravel — road construction/resurfacing, filtration	Pke-30
	Valley Materials Co.	Valley Materials Co.	Scioto	sand — building, portland cement concrete, road construction/resurfacing gravel — road construction/resurfacing, filtration	Pke-26
Portage	Ballentine Excavation Co.	Ballentine Lake	Shalersville	sand — fill gravel — fill	Pe-BA
	Beck Sand & Gravel, Inc.	Beck Sand & Gravel, Inc.	Shalersville	sand — building, portland cement concrete gravel — road construction/resurfacing, filtration, roofing, landscaping	Pe-50
	Blue Stone Sand & Gravel, Inc.	Blue Stone Pit #1	Mantua	sand — building, asphaltic concrete	Pe-B1
	Karl Brugmann Sand & Gravel, Inc.	Karl Brugmann Sand & Gravel, Inc.	Shalersville	sand — building, asphaltic concrete, landscaping	Pe-15
	Oscar Brugmann Sand & Gravel, Inc.	Oscar Brugmann Sand & Gravel, Inc.	Shalersville	sand — building gravel — building	Pe-9
	R. A. Cruise Sand & Gravel, Inc.	R. A. Cruise Sand & Gravel, Inc.	Franklin, Ravenna	sand — unspecified gravel — unspecified	Pe-45
	D & K Materials, Inc.	D & K Materials, Inc.	Brimfield	sand — building, asphaltic concrete	Pe-101
	Don's Dozer Service, Inc. GANS Ltd.	Don's Dozer Service, Inc. Brimfield Sand & Soils	Streetsboro	gravel — building	Pe-96
	Green Oaks Potting Products, Inc. Hilltop Aggregate, Inc.	Green Oaks Hilltop Aggregate, Inc.	Franklin	sand — building	Pe-102
	Hugo Sand Co.	Hugo Sand Co.	Suffield	sand — peat mix	Pe-89
	Jefferson Materials Co.	Jefferson Materials Co.	Franklin	sand — unspecified gravel — unspecified	Pe-56
	Lafarge Corp.	Shalersville Plant - Northern Division	Streetsboro	sand — building, road construction/resurfacing, unspecified gravel — building, road construction/resurfacing, unspecified	Pe-10
	Lakeside Sand & Gravel Co.	Campbell Pit	Shalersville	sand — building, portland cement concrete, asphaltic concrete, mason	Pe-63
	Lucky Sand & Gravel Co.	Lucky Sand & Gravel Co.	Mantua	gravel — asphaltic concrete sand — building, industrial sand gravel — building	Pe-68
	Miller Sand & Gravel, Inc.	Miller Sand & Gravel, Inc.	Windham	sand — portland cement concrete	Pe-LS
	Rainbow Sand & Gravel, Inc.	Rainbow Sand & Gravel, Inc.	Shalersville	gravel — portland cement concrete	Pe-L
Pe-39	Red Brush Peat Co.	Red Brush Peat Co.	Franklin	sand — building, fill gravel — building, fill	Pe-39
	Rockwell Sand & Gravel, Inc.	Rockwell Sand & Gravel, Inc.	Streetsboro	sand — portland cement concrete, asphaltic concrete	Pe-64
	S & S Aggregate, Inc.	Twin Lakes - S & S Agg #10 Twin Lakes - S & S Agg #11	Streetsboro Shalersville, Streetsboro	gravel — building sand — fill	Pe-61
	Schloss Materials Co.	Schloss Materials Co.	Mantua	sand — building, portland cement concrete	Pe-85
				gravel — building gravel — unspecified	Pe-67
				sand — asphaltic concrete, road construction/resurfacing, unspecified	Pe-59
				gravel — asphaltic concrete, road construction/resurfacing, unspecified sand — asphaltic concrete gravel — asphaltic concrete	Pe-60

Preble	Sober Sand & Gravel Co.	Sober Sand & Gravel Co.	Rootstown	sand — building gravel — building	Pe-18
	Solon Excavators Sand & Gravel, Inc.	Alger	Mantua	sand — building	Pe-36
	Sunshine Sand Co. Twinsburg Development Corp.	Sunshine Sand Co. Twinsburg Development Corp.	Franklin Aurora	gravel — building sand — unspecified sand — asphaltic concrete, fill	Pe-SSC Pe-84
	Don Wartko Construction, Inc.	Don Wartko Construction, Inc.	Brimfield	gravel — building sand — fill	Pe-92
	Loxley Aggregates, Inc. U.S. Aggregates	Loxley Aggregates, Inc. U.S. Aggregates/Richmond Plant	Twin Jefferson	sand — building sand — unspecified gravel — unspecified	Pre-9 Pre-AAC
Richland	Wysong Gravel Co.	Wysong Gravel Co.	Somers	sand — building, road construction/resurfacing gravel — building, road construction/resurfacing	Pre-4
	Bartley & Bolin Excavating	Bartley & Bolin, Inc.	Twin	gravel — building, road construction/resurfacing gravel — building, road construction/resurfacing	Pre-6
	D. H. Bowman & Sons, Inc.	D. H. Bowman & Sons, Inc.	Weller	sand — building gravel — building, fill	Rd-20
	Ganges Gravel Co.	Ganges Gravel Co.	Jefferson	sand — asphaltic concrete, fill gravel — asphaltic concrete, road construction/resurfacing, filtration, driveways, fill	Rd-4
	John L. Garber Materials, Inc.	John L. Garber Materials, Inc.	Cass	sand — building gravel — building	Rd-18
Ross	S & S Aggregate, Inc.	S & S Agg #14	Troy	sand — building gravel — building	Rd-14
	David E. Edgington	Edgington Pit	Monroe	sand — asphaltic concrete, road construction/resurfacing, unspecified	Rd-5
	Haubeil & Sons Asphalt & Materials, Inc.	Haubeil & Sons Asphalt & Materials, Inc.	Concord	gravel — asphaltic concrete, road construction/resurfacing, unspecified	Rs-E
	Muskingum River Gravel Co.	S & S Aggregate Plant #7	Springfield	sand — building gravel — building gravel — asphaltic concrete, road construction/resurfacing, filtration	Rs-H
	Mark E. Scott	Scott Pit	Jefferson, Scioto	sand — asphaltic concrete, road construction/resurfacing, unspecified	Rs-M
Scioto	Shelly Materials, Inc.	Shelly Materials, Inc. Plant #21	Green	gravel — asphaltic concrete, road construction/resurfacing, unspecified	Rs-P
	Tackett Builders	Tackett Builders	Springfield	sand — building gravel — building	Rs-27
	ATS Enterprises	ATS Enterprises	Springfield	sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, fill, unspecified	Rs-T
	E. E. Blair Construction Co.	Cab Pit	Green	gravel — building sand — unspecified	So-79
	Boone Coleman Construction, Inc.	Coleman Pit	Porter	sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing, fill, unspecified	So-98
Shelby	D G.M., Inc.	Tow Path Ready Mix	Washington	gravel — building sand — unspecified	So-B
	Davon, Inc.	Scioto Valley Resources	Morgan	gravel — unspecified sand — building	So-DGM
	Miami River Stone Co.	Miami River Stone Co.	Valley	gravel — building sand — unspecified	So-100
	Spring Creek Corp.	Jones Deposit	Orange	sand — road construction/resurfacing gravel — road construction/resurfacing	Shy-17
		Pence Deposit	Washington	sand — asphaltic concrete gravel — asphaltic concrete sand — building, portland cement concrete, asphaltic concrete gravel — building, portland cement concrete, asphaltic concrete	Shy-18 Shy-11

1999 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Stark	American Sand & Gravel, Inc.	Plant 2	Jackson	sand — road construction/resurfacing	Sk-203
	Beaver Excavating, Inc.	Plant 4	Jackson	gravel — road construction/resurfacing	Sk-243
	Central-Allied Enterprises, Inc.	Stone Products	Canton	sand — road construction/resurfacing	Sk-BE
		Massillon Washed Gravel Div.	Bethlehem	gravel — road construction/resurfacing	Sk-607
		Massillon Washed Gravel Div.	Bethlehem	sand — unspecified	Sk-MW
		Central Aggregate Div.	Perry	gravel — unspecified	Sk-CA
		Canton Aggregate Div.	Plain	sand — unspecified	Sk-681
	Heiser Sand & Gravel Corp.	Heiser Sand & Gravel Corp.	Jackson	sand — portland cement concrete, asphaltic concrete, road construction/resurfacing, unspecified	Sk-HS1
	Lafarge Corp.	Navarre- Northern Division	Bethlehem, Perry	sand — building	Sk-241
	Massillon Materials, Inc.	Massillon Materials, Inc.	Perry	gravel — building	Sk-M
Summit	National Aggregates, Inc.	MMI Warmington Plant	Perry	sand — unspecified	Sk-M1
	Northern Ohio Paving Co.	National Aggregates, Inc.	Sandy	gravel — road construction/resurfacing	Sk-1017
		Allied Plant #3	Perry	sand — unspecified	Sk-N
	Oster Sand & Gravel, Inc.	Massillon Plant	Jackson, Perry	gravel — portland cement concrete, asphaltic concrete	Sk-165
		Mudbrook Plant	Jackson	gravel — building, portland cement concrete, asphaltic concrete, fill	Sk-R
	Alden Sand & Gravel Co.	Alden Sand & Gravel Co.	Northampton	sand — fill	Sk-55
	Donald A. Coy	Donald A. Coy	Norton	sand — building	Sk-DC
	Riverside Sand & Gravel Co., Inc.	Riverside Sand & Gravel Co., Inc.	Stow, Tallmadge	sand — fill	Sk-24
	S & S Aggregate, Inc.	Twin Lakes - S & S Agg #9	Coventry	sand — asphaltic concrete, unspecified	Sk-44
				gravel — asphaltic concrete, road construction/resurfacing, unspecified	
Trumbull	Nick's Trucking Samco, Inc.	Nick's Trucking Springbrook	Mesopotamia Mesopotamia	sand — fill	Tl-16
Tuscarawas	Goshen Sand & Gravel	Benco Leasing dba Goshen Sand & Gravel	Goshen	sand — building, portland cement concrete, asphaltic concrete, fill	Tl-12
	JBM Ltd.	State Rte. 416 S&G	Goshen	gravel — building	Ts-1976
	L & M Mineral Co.	Spring Industries	Goshen, Warwick	sand — building	Ts-2018
	Massillon Materials, Inc.	MMI Sandville Plant 516	Sandy	gravel — building	Ts-SI
	Newton Asphalt Paving, Inc.	516	Dover	gravel — road construction/resurfacing	Ts-MM
	Oster Sand & Gravel, Inc.	Bolivar Pit	Sandy	sand — asphaltic concrete	Ts-2001
				gravel — asphaltic concrete	Ts-2036
	Sidco Development, Inc.	Midvale	Goshen	sand — building, portland cement concrete, asphaltic concrete, fill	
	Soehnlen Bros. Sand & Gravel, Inc.	Soehnlen Bros. Sand & Gravel, Inc.	Wayne	road construction/resurfacing, fill	Ts-S2
				sand — portland cement concrete	Ts-1826
				gravel — portland cement concrete	
				sand — building, portland cement concrete, road construction/resurfacing, industrial sand	
				gravel — building, asphaltic concrete, road construction/resurfacing, filtration	

Warren	Stewart & Reichman, Inc.	Stewart & Reichman, Inc.	Warwick	sand — road construction/resurfacing	Ts-111
	Stocker Sand & Gravel Co.	Stocker Sand & Gravel Co. - Gnaden	Clay	gravel — road construction/resurfacing	Ts-69
		Stocker Sand & Gravel Co. - Island	Clay	gravel — building, road construction/resurfacing	Ts-125
	Embro, Inc.	Embro, Inc.	Franklin	sand — building	Wan-7
	L & I Pit & Mill	L & I Pit & Mill	Union	gravel — building	Wan-50
Washington	Little Miami Sand & Gravel	Little Miami Sand & Gravel Plant #1	Salem	gravel — building	Wan-B
	Martin Marietta Aggregates	Little Miami Sand & Gravel Plant #2	Salem	gravel — unspecified	Wan-46
		Franklin Gravel #189	Franklin	gravel — unspecified	Wan-38
	Miami View Mining Co., Ltd.	Miami View	Union	sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Wan-MV
	Morrow Gravel Co.	Morrow Gravel Co.	Salem	sand — bank run	Wan-M2
	Carl E. Oeder & Sons Sand & Gravel	Carl E. Oeder & Sons Sand & Gravel	Turtle Creek	gravel — building, portland cement concrete, asphaltic concrete	Wan-41
	Atlas Towing Co.	Belpre Bank Run	Belpre	gravel — unspecified	Wn-54
	Beverly Slag Co.	Devola Pit	Muskingum	sand — unspecified	Wn-55
	Briggs Sand & Gravel, Inc.	Briggs Sand & Gravel, Inc.	Warren	gravel — building	Wn-508
	Chesterhill Stone Co.	Willow Island	Newport	gravel — road construction/resurfacing	Wn-C
Wayne	Grimes Excavating	Grimes Sand & Gravel	Grandview	gravel — unspecified	Wn-1008
	Muskingum River Gravel Co.	Plant #2	Grandview	gravel — unspecified	Wn-38
	Trout Sand & Gravel Co.	Trout Sand & Gravel Co.	Warren	sand — asphaltic concrete, unspecified	Wn-510
	Buckeye Excavating Development, Inc.	Steven Steiner	Canaan	gravel — building	We-23
	E. A. Construction, Inc.	#1	Clinton	sand — building	We-24
	Prairie Lane Sand & Gravel Co.	Prairie Lane Sand & Gravel Co.	Franklin	gravel — building	We-11
	Rupp Construction, Inc.	Rupp Construction, Inc.	Baughman	sand — building, road construction/resurfacing	We-7
	Zollinger Sand & Gravel Co.	Zollinger Sand & Gravel Co.	Chippewa	sand — building, portland cement concrete, asphaltic concrete	We-15
	Heer Excavating, Inc.	Mason Pit	Superior	gravel — fill	Ws-22
	Andy Nixon Contractors, Inc.	Nixon Pit	Madison	sand — building	Ws-N
Williams	Stoneco, Inc.	Montpelier S. - Takacs Pit	Superior	gravel — building	Ws-T
	Thiel Construction Co.	Thiel Construction Co.	Superior	sand — building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Ws-21
	Weber Sand & Gravel, Inc.	Weber Sand & Gravel, Inc.	St. Joseph	gravel — building, portland cement concrete	Ws-11
	Kirby's Sand & Gravel, Inc.	Kirby's Sand & Gravel, Inc.	Crane, Eden	gravel — building, fill	Wt-17
	National Lime & Stone Co.	Upper Sandusky Plant	Eden	sand — building, filtration	Wt-15 ⁴
Wyandot	Precision Aggregate, Inc.	Precision Aggregate I	Crane, Eden	gravel — portland cement concrete	Wt-4
				sand — portland cement concrete	
				gravel — building	

⁴Information for Wt-15 includes information for Wt-18.

**1999 SANDSTONE/CONGLOMERATE COMPANIES
WITH SALES OR PRODUCTION**

Company	No. of operations	Sales (tons)	Production (tons)
Alan Stone Co., Inc.	1	1,100	1,000
Beaver Excavating, Inc.	1	694,367	694,367
Best Sand Corp.	2	891,167	890,044
Briar Hill Stone Co.	4	25,484	25,484
Cleveland Quarries	1	5,860	13,369
E. A. Construction, Inc.	1	27,400	27,400
Keeney Sand & Stone, Inc.	1	97,698	97,698
Kimble Clay & Limestone Co.	1	11,578	11,578
Mesenburg Bros., Inc.	1	9,107	9,107
Newbury Sand & Gravel	1	13,982	13,982
Oglebay Norton Industrial Sands, Inc.	2	357,232	446,539
Riverside Sand & Gravel Co., Inc.	1	1,632	1,632
Samco, Inc.	1	2,672	2,672
Schrader and Son, Inc.	1	39,294	39,294
R. W. Sidley, Inc.	2	150,850	150,850
Solomon's Mines, Inc.	2	18,386	18,386
Suburban South Recycling & Disposal Facility	1	372,369	372,369
U.S. Silica Co.	1	15,667	15,500
Waller Bros. Stone Co.	2	14,040	14,040
Frank Widmor Coal Co., Inc.	1	5,525	5,525
TOTAL: 20 companies	28	2,755,410	2,850,836

1999 OHIO DIRECTORY OF SANDSTONE/CONGLOMERATE MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

For those mines that have not been assigned a state mine number, a letter designation is used (example: Gea-N).

County	Name of operator	Name of quarry	Township	Geological unit	Type and principal use	State mine number
Belmont	Frank Widmor Coal Co., Inc.	Frank Widmor Coal Co., Inc.	Pultney	Pennsylvanian	crushed or broken stone — riprap	Bt-1190
Columbiana	Solomon's Mines, Inc.	Solomon's Mines, Inc.	Salem		crushed or broken stone — road base	Ca-S ¹
Coshocton	Briar Hill Stone Co.	Quarry #26 Quarry #32 Quarry #55 Quarry #3	Monroe Monroe Monroe Tiverton	Massillon (Pennsylvanian) Massillon (Pennsylvanian) Massillon (Pennsylvanian) Massillon (Pennsylvanian)	dimension stone — rough construction dimension stone — rough construction dimension stone — rough construction dimension stone — rough construction	Cn-13 Cn-686 Cn-815 Cn-659
Erie	Cleveland Quarries	Birmingham Quarry	Florence	Berea (Mississippian)	dimension stone — rough construction, rubble, grinding, finished stone	Ee-21
Gallia	Beaver Excavating, Inc.	Gavin Plant Landfill	Cheshire		crushed or broken stone — fill	Ga-VFL
Geauga	Best Sand Corp.	Best Sand Corp.	Munson	Sharon conglomerate (Pennsylvanian)	crushed or broken stone — foundry sand, glass sand, metallurgical pebble, refractory, polishing/grinding sand, engine sand, frac sand, construction, industrial sand, landscape, filtration, filler	Gea-3
	Newbury Sand & Gravel	Newbury Sand & Gravel	Burton, Newbury Hamden	Sharon conglomerate (Pennsylvanian)	crushed or broken stone — construction	Gea-N
	R. W. Sidley, Inc.	Hamden Pit Thompson Pit	Thompson	Sharon conglomerate (Pennsylvanian)	crushed or broken stone — aggregate, construction, golf course	Gea-S Gea-1
Huron	Mesenburg Bros., Inc.	Mesenburg Bros., Inc.	Townsend	Berea (Mississippian)	crushed or broken stone — riprap	Hrn-8
Knox	Oglebay Norton Industrial Sands, Inc.	Millwood Plant	Butler, Union	Black Hand (Mississippian)	crushed or broken stone — glass sand, silica flour, construction, unspecified	Kx-1
Lake	Keeney Sand & Stone, Inc.	Keeney Sand & Stone, Inc.	Leroy		crushed or broken stone — aggregate, construction	Lke-K
Perry	Oglebay Norton Industrial Sands, Inc.	Glass Rock Plant	Hopewell	Massillon (Pennsylvanian)	crushed or broken stone — glass sand, refractory, silica flour, industry sand	Py-344
	Suburban South Recycling & Disposal Facility	Suburban South Recycling & Disposal Facility	Hopewell		crushed or broken stone — unspecified	Py-SU
Pike	Best Sand Corp.	Best Sand Corp.	Jackson	Sharon conglomerate (Pennsylvanian)	crushed or broken stone — foundry sand, glass sand, metallurgical pebble, refractory, polishing/grinding sand, engine sand, construction, industrial sand, landscape	Pke-31
	Schrader and Son, Inc.	Schrader & Son, Inc.	Jackson	Sharon conglomerate (Pennsylvanian)	crushed or broken stone — foundry sand, golf course, decorative	Pke-S
Scioto	Waller Bros. Stone Co.	Inskeep Quarry Crabtree Quarry	Rush Union	Buena Vista (Mississippian) Buena Vista (Mississippian)	dimension stone — rough construction dimension stone — rough construction	So-48 So-76
Summit	Riverside Sand & Gravel Co., Inc.	Riverside Sand & Gravel Co., Inc.	Stow, Tallmadge		crushed or broken stone — riprap	St-24
Trumbull	Samco, Inc.	Springbrook	Mesopotamia		crushed or broken stone — construction dimension stone — landscape	Tl-12
Tuscarawas	Kimble Clay & Limestone Co. U.S. Silica Co.	Kimble Clay & Limestone Co. Dundee Mine	Dover Wayne	Pennsylvanian Massillon (Pennsylvanian)	crushed or broken stone — construction crushed or broken stone — foundry sand	Ts-1818 Ts-1660
Washington	Alan Stone Co., Inc.	Marietta Quarry	Warren		crushed or broken stone — riprap	Wn-45
Wayne	E. A. Construction, Inc.	#1	Clinton		crushed or broken stone — construction	Wo-EA

¹Information for Ca-S includes information for Mg-632.

**1999 CLAY COMPANIES WITH
SALES OR PRODUCTION**

Company	No. of operations	Sales (tons)	Production (tons)
American Landfill, Inc.	1	40,500	40,500
Athens Hocking Reclamation Center	1	574	574
Bearcreek Clay Co.	2	36,630	36,630
Belden Brick Co.	4	256,353	256,353
Blue Jay Enterprises of Ts. Co., Inc.	2	23,224	23,224
Bowerston Shale Co.	1	5,499	5,499
Browning-Ferris Industries of Ohio, Inc.	1	227,102	227,102
Buckeye Industrial Mining Co.	1	51,490	51,490
Cedar Heights Clay Co.	1	46,161	46,161
Countryside Waste Services, Inc.	1	68,500	68,500
County Disposal (Ohio), Inc.	1	170,669	170,669
D. & D. Mining Co.	1	13,958	13,958
James E. Downard	1	1,665	1,665
E. A. Construction, Inc.	1	6,590	6,590
ESSROC Cement Corp.	2	13,776	13,776
East Fairfield Coal Co.	1	2,999	2,999
David L. Florence	1	9,582	9,582
General Clay Products Corp.	1	23,738	23,738
General Motors Power Train	1	135,000	135,000
Green Oaks Potting Products, Inc.	1	5	5
Holmes Limestone Co.	2	62,818	62,818
Van Johnson Construction, Inc.	1	3,018	3,018
Kimble Clay & Limestone Co.	1	219,138	219,138
Koch-Glitsch, Inc.	1	1,335	1,335
L & M Mineral Co.	1	11,900	11,900
Lafarge Corp.	1	173,758	173,758
Loxley Aggregates, Inc.	1	2,308	2,308
Luburgh Inc.	1	51,750	51,750
Mt. Eaton Reclamation	1	410,469	410,469
Andy Nixon Contractors, Inc.	1	153	153
Patrick Excavating, Inc.	1	4,060	4,060
Putnam County Board of Commissioners	1	3,900	3,900
Red Brush Peat Co.	1	43	43
Rumpke Mountain Mining Co.	1	365,819	365,819
Sandkuhl Clay Works, Inc.	1	8,613	8,613
Seaway Sand & Stone, Inc.	1	9,003	9,003
Joe Simak & Sons Trucking, Inc.	1	4,353	4,353
Sober Sand & Gravel Co.	1	12,700	12,700
Solomon's Mines, Inc.	2	9,528	9,528
Soltis Sand & Gravel	1	1,384	1,384
Southdown Inc.	1	146,416	158,271
State Line Resources, Inc.	1	99,298	113,335
Stone Creek Brick Co.	1	39,254	39,254
Suburban South Recycling & Disposal Facility	1	289,153	289,153
Valley Clay Mining Co.	2	10,500	10,500
Waterloo Coal Co., Inc.	1	6,000	6,000
Joann O. Weddle	1	13,340	13,340
Zollinger Sand & Gravel Co.	1	3,600	3,600
TOTAL: 48 companies	57	3,097,626	3,123,518

1999 OHIO DIRECTORY OF CLAY-MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

For those mines that have not been assigned a state mine number, a letter designation is used (example: Cn-B).

CLAY OPERATORS DIRECTORIES

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County	Name of operator	Name of mine or quarry	Township	Geological unit	Principal use	State mine number
Ashtabula	Joe Simak & Sons Trucking, Inc.	North Ridge Pit	Kingsville		construction	Asa-18
Athens	Athens Hocking Reclamation Center	Athens Hocking Reclamation Center	York		plug oil & gas wells	As-594
Auglaize	Sandkuhl Clay Works, Inc.	Sandkuhl Clay Works, Inc.	Salem	Pleistocene	common clay products	Ae-7
Columbiana	Buckeye Industrial Mining Co.	West Point Clay	Madison		vitrified products, construction, landfill	Ca-BIM
	D. & D. Mining Co.	D. & D. Strip	Unity		refractories	Ca-348
	Solomon's Mines, Inc.	Solomon's Mines, Inc.	Salem		landfill	Ca-S ¹
	State Line Resources, Inc.	State Line Resources, Inc.	Middleton	Lower Kittanning (Pennsylvanian)	common clay products	Ca-505
Defiance	General Motors Power Train	GMPT - clay borrow area	Richland		landfill	De-3
Fairfield	James E. Downard	Downard Pit	Rush Creek		fill	Fd-16
	Van Johnson Construction, Inc.	Molly Johnson Mining	Berne		construction	Fd-VJ
Geauga	Soltis Sand & Gravel	Soltis Sand & Gravel	Parkman		common clay products	Gea-9
Greene	Southdown Inc.	Miller et al.	Bath		cement manufacture	Ge-8
	Joann O. Weddle	S & W	Xenia		common clay products	Ge-W
Hamilton	Rumpke Mountain Mining Co.	Rumpke Mountain Mining Co.	Colerain		landfill	Hmn-72
Holmes	Holmes Limestone Co.	241 Plant	Hardy	Putnam Hill (Pennsylvanian)	common clay products	Hs-67
Jackson	Cedar Heights Clay Co.	Harrison	Madison	Lower Kittanning (Pennsylvanian)	unspecified	Jkn-CH2
	Waterloo Coal Co., Inc.	Waterloo Coal Stone Plant - Zoar Mill	Madison	Lower Kittanning (Pennsylvanian)	unspecified	Jkn-367
Lucas	Seaway Sand & Stone, Inc.	Seaway Sand & Stone, Inc.	Swanton		common clay products	Ls-13
Mahoning	East Fairfield Coal Co.	Withers-Petersburg	Springfield		refractories	Mg-631
	ESSROC Cement Corp.	Bessemer Pit	Poland		cement manufacture	Mg-608
		Carbon Pit	Poland, Springfield		construction	Mg-EM
Medina	General Clay Products Corp.	General Clay Products Pit #5	Wadsworth		common clay products	Ma-6
Mercer	Countryside Waste Services, Inc.	Countryside Waste Services, Inc.	Franklin		landfill	Mr-C
Muskingum	Boverston Shale Co.	Frazzysburg	Jackson	Flint Ridge & Middle Mercer (Pennsylvanian)	common clay products	Mum-776
	Luburgh Inc.	Luburgh Clay Pit	Monroe		landfill	Mum-L
	Valley Clay Mining Co.	Spring #4	Newton	Tionesta (Pennsylvanian)	stoneware	Mum-904
Ottawa	Browning-Ferris Industries of Ohio, Inc.	Ottawa County Landfill	Erie		landfill	Oa-BF
Paulding	Lafarge Corp.	Paulding Quarry	Crane	Devonian	cement manufacture	Pg-1
Perry	Bearcreek Clay Co.	Dennis Clay	Monday Creek		common clay products	Py-338
	Suburban South Recycling & Disposal Facility	Nelson/Butler	Clayton		common clay products	Py-D1
	Valley Clay Mining Co.	Suburban South Recycling & Disposal Facility	Hopewell		landfill	Py-SU
Portage	Green Oaks Potting Products, Inc.	Tague Mine	Harrison	Lower Kittanning (Pennsylvanian)	stoneware	Py-V
	Patrick Excavating, Inc.	Green Oaks	Franklin		landfill	Pe-89
	Red Brush Peat Co.	Patrick	Charlestown		construction	Pe-P
	Sober Sand & Gravel Co.	Red Brush Peat Co.	Franklin		fill	Pe-61
		Sober Sand & Gravel Co.	Rootstown		construction	Pe-18

¹Information for Ca-S includes information for Mg-632.

1999 OHIO DIRECTORY OF CLAY-MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY—Continued

County	Name of operator	Name of mine or quarry	Township	Geological unit	Principal use	State mine number
Preble	Loxley Aggregates, Inc.	Loxley Aggregates, Inc.	Twin	Pleistocene	construction	Pre-9
Putnam	Putnam County Board of Commissioners	Putnam County Landfill Borrow Pit	Ottawa		landfill	Pm-P
Stark	American Landfill, Inc. Holmes Limestone Co. Koch-Glitsch, Inc.	American Landfill, Inc. Bolivar Mine Koch-Glitsch, Inc.	Sandy Bethlehem Pike	Middle Kittanning (Pennsylvanian) Brookville (Pennsylvanian) Lower Kittanning (Pennsylvanian)	landfill common clay products vitrified products	Sk-246 Sk-235 Sk-K
Tuscarawas	Belden Brick Co.	Wallick Pit	Franklin, Wayne	Brookville & Lower Kittanning (Pennsylvanian)	common clay products	Ts-1841
		Belden Pit	Sugar Creek	Lower Kittanning, Brookville & Tionesta (Pennsylvanian)	common clay products	Ts-1646
	Blue Jay Enterprises of Ts. Co., Inc.	Moomaw Pit	Sugar Creek	Brookville & Tionesta (Pennsylvanian)	common clay products	Ts-1517
		Shanesville Pit	Sugar Creek	Brookville (Pennsylvanian)	common clay products	Ts-1939
		Blue Jay #1	Sandy	Brookville & Tionesta (Pennsylvanian)	common clay products	Ts-BJ
		Swonger Pit	Sandy	Brookville & Tionesta (Pennsylvanian)	common clay products	Ts-520
	Kimble Clay & Limestone Co.	Kimble Clay & Limestone Co.	Dover	Brookville & Tionesta (Pennsylvanian)	refractories, landfill	Ts-1818
	L & M Mineral Co.	Luikart	Mill & Warwick Jefferson	Pennsylvanian	common clay products	Ts-1914
	Stone Creek Brick Co.	Stone Creek Brick Clay Mine			vitrified products	Ts-1557
Washington	David L. Florence	Florence Pit	Warren		construction	Wn-F
Wayne	E. A. Construction, Inc. Mt. Eaton Reclamation Zollinger Sand & Gravel Co.	#1 Mt. Eaton Reclamation Zollinger Sand & Gravel Co.	Clinton Paint Chippewa	Middle Kittanning (Pennsylvanian) Pleistocene	construction landfill construction	We-EA We-26 We-15
Williams	Andy Nixon Contractors, Inc.	Nixon Pit	Madison		landfill	Ws-N
Wyandot	County Disposal (Ohio), Inc.	County Environmental of Wyandot	Crawford		landfill	Wt-CD

**1999 SHALE COMPANIES WITH
SALES OR PRODUCTION**

Company	No. of operations	Sales (tons)	Production (tons)
American Landfill, Inc.	1	665,173	665,173
Barrett Paving Materials, Inc.	1	8,600	8,600
Bearcreek Clay Co.	2	66,748	66,748
Belden Brick Co.	4	173,096	173,096
Blue Jay Enterprises of Ts. Co., Inc.	2	8,371	8,371
Bowerston Shale Co.	2	50,199	50,199
Dome Minerals, Inc.	1	24,500	24,500
ESSROC Cement Corp.	1	67,131	67,131
Glen-Gery Corp.	1	208,947	208,947
Holmes Limestone Co.	2	44,581	44,581
Hydraulic Press Brick Co.	1	322,624	322,624
Kimble Clay & Limestone Co.	1	263,029	263,029
Knox County Board of Commissioners	1	4,188	4,188
L & M Mineral Co.	1	60,119	60,119
Prairie Lane Sand & Gravel Co.	1	3,809	3,809
Richland Moulded Brick Co.	1	14,701	14,701
Rumpke Mountain Mining Co.	1	2,043,038	2,043,038
Stone Creek Brick Co.	1	5,820	5,820
Summitville Tiles, Inc.	1	35,761	35,761
TOTAL: 19 companies	26	4,070,435	4,070,435

1999 OHIO DIRECTORY OF SHALE-MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

For those mines that have not been assigned a state mine number, a letter designation is used (example: Kx-K).

County	Name of operator	Name of mine	Township	Geological unit	Principal use	State mine number
Columbiana	Summitville Tiles, Inc. Dome Minerals, Inc.	Summitville Tiles, Inc. Dome Minerals, Inc.	Franklin Franklin		common clay products brick pavers	Ca-205 Ca-947
Cuyahoga	Hydraulic Press Brick Co.	Hydraulic Press Brick Co.	City of Independence	Chagrin (Devonian)	lightweight aggregate	Cya-19
Hamilton	Rumpke Mountain Mining Co.	Rumpke Mountain Mining Co.	Colerain	Upper Ordovician	landfill	Hmn-72
Harrison	Bowerston Shale Co.	Bowerston	Monroe	Conemaugh Group (Pennsylvanian)	common clay products	Hn-152
Holmes	Holmes Limestone Co.	241 Plant	Hardy	Pennsylvanian	common clay products	Hs-67
Knox	Knox County Board of Commissioners	Apple Valley	Brown		construction	Kx-K
Licking	Bowerston Shale Co.	Hanover	Hanover	Logan Formation (Mississippian)	common clay products	Lg-501
Lucas	Barrett Paving Materials, Inc.	Sylvania Quarry	Sylvania		cement manufacture	Ls-12
Mahoning	ESSROC Cement Corp.	Carbon Pit	Poland, Springfield		cement manufacture	Mg-EM
Marion	Glen-Gery Corp.	Iberia Quarry	Tully	Bedford (Mississippian)	common clay products	Mn-7
Perry	Bearcreek Clay Co.	Dennis Clay Nelson/Butler	Monday Creek Clayton		common clay products	Py-338 Py-D1
Richland	Richland Moulded Brick Co.	Richland Moulded Brick Co.	Franklin	Bedford (Mississippian)	common clay products	Rd-R
Stark	American Landfill, Inc.	American Landfill, Inc.	Sandy	Middle Kittanning (Pennsylvanian)	landfill	Sk-246
Tuscarawas	Belden Brick Co.	Wallick Pit	Franklin, Wayne	Brookville & Lower Kittanning (Pennsylvanian)	common clay products	Ts-1841
		Moomaw Pit Belden Pit	Sugar Creek Sugar Creek	Brookville & Tionesta (Pennsylvanian)	common clay products	Ts-1517 Ts-1646
		Shanesville Pit Swonger Pit Blue Jay #1 L&M Rainsburg Kimble Clay & Limestone Co.	Sugar Creek Sandy Sandy Rush Dover	Brookville (Pennsylvanian) Brookville & Tionesta (Pennsylvanian) Brookville & Tionesta (Pennsylvanian) Pennsylvanian Pennsylvanian	common clay products common clay products common clay products common clay products common clay products	Ts-1939 Ts-520 Ts-BJ Ts-H1 Ts-1818
	Blue Jay Enterprises of Ts. Co., Inc. Holmes Limestone Co. Kimble Clay & Limestone Co. L & M Mineral Co. Stone Creek Brick Co.	Evans Stone Creek Brick Shale Pit	Rush Jefferson		construction	Ts-1884 Ts-1558
Wayne	Prairie Lane Sand & Gravel Co.	Prairie Lane Sand & Gravel Co.	Franklin		common clay products vitrified products construction	We-11

**1999 OHIO DIRECTORY OF SALT-MINE AND SALT-BRINING-PLANT OPERATORS
REPORTING SALES OR PRODUCTION, BY COUNTY**

County	Name of operator	Name of mine	Township	Geological unit and product	State mine number
Cuyahoga	Cargill Incorporated	Cleveland Mine	City of Cleveland	Salina (Silurian)—rock salt	Cya-30
Lake	Morton International, Inc.	Fairport Mine	Painesville	Salina (Silurian)—rock salt	Lke-6
Licking	R. H. Penick Co.	R. H. Penick Co.	Newark	"Newburg" (Silurian)—natural brine	Lg-45
Summit	Cargill Incorporated	Cargill Incorporated	Coventry	Salina (Silurian)—artificial brine	St-9127
Wayne	Morton International, Inc.	Morton Salt Well Field	Milton	Salina (Silurian)—artificial brine	We-9129

1999 OHIO DIRECTORY OF GYPSUM-MINE OPERATORS REPORTING SALES OR PRODUCTION

County	Name of operator	Name of mine	Township	Geological unit	State mine number
Ottawa	Celotex Corp.	American #2	Portage	Silurian	Oa-2

1999 OHIO DIRECTORY OF PEAT-MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

County	Name of operator	Name of mine	Township	Principal use	State mine number
Champaign	Sphagnum Moss Peat Farm	Sphagnum Moss Peat Farm	Harrison	mulch	Cpn-9
Portage	Green Oaks Potting Products, Inc. Red Brush Peat Co.	Green Oaks Red Brush Peat Co.	Franklin Franklin	unspecified mulch	Pe-89 Pe-61
Williams	Lingvai Peat Co.	Lingvai Peat Co.	Center	mulch	Ws-17

**NUMERICAL INDEX OF OPERATORS OF MINES
SHOWN ON 1999 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY**

COAL ● ○

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mineral Resources Management permit number</i>	<i>Name of operator</i>
3	Belmont	Bt-68	D-0360	Ohio Valley Coal Co.
59	Carroll	Cl-17	D-0282	C & E Coal, Inc.
146	Harrison	Hn-217	D-0440	Varkony Mining Co.
150	Harrison	Hn-700	D-51, D-54, D-334, D-414	Consolidation Coal Co.
165	Jackson	Jkn-367	D-0594, D-968, D-1083, D-1167	Waterloo Coal Co., Inc.
213	Meigs, Gallia	Ms-294	D-0355	Southern Ohio Coal Co.
215	Monroe	Me-4	D-0433	Quarto Mining Co. (subsidiary of Consolidation Coal Co.)
228	Morgan, Noble	Ne-41	D-1034, D-1084	Central Ohio Coal Co.
246	Stark	Sk-208	D-1015	ENZ, Inc.
261	Tuscarawas	Ts-1646	IM-44	Belden Brick Co.
262	Tuscarawas	Ts-1727	IM-9	Kimble Clay & Limestone Co.
267	Tuscarawas	Ts-1914	D-0701	L & M Mineral Co.
300	Meigs, Vinton	Ms-293	D-0354, D-0463	Southern Ohio Coal Co.
363	Stark	Sk-235	D-0865	Holmes Limestone Co.
418	Vinton	Vn-182	D-0631	R. A. Eberts Co., Inc.
420	Vinton	Vn-184	D-0609	Waterloo Coal Co., Inc.
424	Belmont	Bt-1150	D-0478, D-0597	Marietta Coal Co.
441	Columbiana	Ca-348	D-1002	D. & D. Mining Co.
493	Washington	Ne-1008	D-0706	B & N Coal, Inc.
513	Vinton	Vn-S	D-0793	Sands Hill Coal Co., Inc.
514	Noble	Ne-151	D-0807	B & N Coal, Inc.
580	Harrison	Hn-710	D-0426	Harrison Mining Corp.
598	Tuscarawas	Ts-2019	D-0852	Kimble Clay & Limestone Co.
602	Vinton	Vn-191	D-0867, D-0957, D-1004	Waterloo Coal Co., Inc.
603	Belmont	Bt-1190	IM-1089, D-1061	Sidwell Materials, Inc.
604	Belmont	Bt-AT	D-0922	Marietta Coal Co.
625	Mahoning	Mg-608	IM-4	ESSROC Cement Corp.
627	Noble	Ne-155	D-0958	B & N Coal, Inc.
631	Stark	Sk-246	D-1090	American Landfill, Inc.
634	Tuscarawas	Ts-1939	IM-47	Belden Brick Co.
640	Tuscarawas	Ts-RM	D-0904	Kimble Clay & Limestone Co.
648	Guernsey	Gy-315	D-0951	Northshore Coal, Inc.
657	Jefferson	Jfn-823	D-0949	Sterling Mining Co.
663	Perry	Py-A	D-931	Avis Coal Co.
667	Tuscarawas	Ts-1517	IM-46	Belden Brick Co.
674	Tuscarawas	Ts-HLC	D-0969	Holmes Limestone Co.
675	Vinton	Vn-194	D-0973	Sands Hill Coal Co., Inc.
683	Belmont	Bt-B	D-0998	Northshore Coal, Inc.
688	Columbiana	Ca-CM1	D-0950	Commercial Minerals, Inc.
696	Guernsey	Gy-318	D-1025	Valley Mining, Inc.
703	Holmes	Hs-M	D-1021	Copperhead Mining
709	Jefferson	Jfn-831V	D-1026	Valley Mining, Inc.
716	Muskingum	Mum-O	D-1030	Oxford Mining Co., Inc.
720	Tuscarawas	Ts-1841	IM-45	Belden Brick Co.
723	Tuscarawas	Ts-2043	D-1047	Holmes Limestone Co.
731	Belmont	Bt-RF2	D-1062	Oxford Mining Co., Inc.
732	Belmont	Bt-VM	D-1059	Valley Mining, Inc.
736	Columbiana	Ca-997	D-1051	Commercial Minerals, Inc.
740	Coshocton	Cn-H1	D-1094	Holmes Limestone Co.
745	Guernsey	Gy-327	D-1088	Holmes Limestone Co.
748	Harrison	Hn-759	D-1037	Melvin Schaney
749	Harrison	Hn-761	D-1082, D-1097	Sunnydale Mining
756	Jefferson	Jfn-835	D-1063	Anthony Mining Co., Inc.
758	Jefferson	Jfn-ST	D-1019	Sterling Mining Co.
760	Noble	Ne-BN	D-1038	B & N Coal, Inc.
764	Perry	Py-O	D-1086	Oxford Mining Co., Inc.
769	Carroll	Cl-BIM	D-1107	Buckeye Industrial Mining Co.
779	Stark	Sk-HCC	D-1106	Holmes Limestone Co.
783	Tuscarawas	Ts-520	IM-214	Blue Jay Enterprises of Ts. Co., Inc.
784	Tuscarawas	Ts-K4	D-1079	Kimble Clay & Limestone Co.

**NUMERICAL INDEX OF OPERATORS OF MINES
SHOWN ON 1999 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY — Continued**

COAL — Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mineral Resources Management permit number</i>	<i>Name of operator</i>
787	Gallia	Ga-629	D-1095	Sands Hill Coal Co., Inc.
790	Columbiana	Ca-1003	D-0928	Buckeye Industrial Mining Co.
795	Harrison	Hn-767	D-1124	Schiappa Coal Co., Inc.
796	Harrison, Jefferson	Jfn-K	IM-1164	K.C.C.I.
797	Jackson	Jkn-CH2	IM-1302	Cedar Heights Clay Co.
799	Noble	Ne-BN2	D-1122	B & N Coal, Inc.
801	Perry	Py-BC1	D-1126	Buckingham Coal Co., Inc.
802	Stark	Sk-B	D-1123	Buckeye Industrial Mining Co.
806	Tuscarawas	Ts-VM	D-1125	Valley Mining, Inc.
810	Belmont	Bt-1171	D-0674	Marietta Coal Co.
811	Belmont	Bt-M3	D-1134	Marietta Coal Co.
812	Belmont	Bt-M4	D-1135	Marietta Coal Co.
813	Belmont	Bt-M5	D-1138	Marietta Coal Co.
814	Belmont	Bt-M6	D-1152	Marietta Coal Co.
817	Columbiana	Ca-BI1	D-1154	Buckeye Industrial Mining Co.
819	Coshocton	Cn-B	D-1142	Weslo Inc.
822	Gallia	Ga-VFL	IM-1314	Beaver Excavating
825	Jackson	Jkn-S3	D-1137	Sands Hill Coal Co., Inc.
826	Jefferson	Jfn-FM	D-1147	F. & M. Coal Co.
830	Tuscarawas	Ts-K5	D-1133	Kimble Clay & Limestone Co.
831	Stark	Sk-205	D-1144	ENZ, Inc.
832	Belmont	Bt-BE	D-1159	Bennoc, Inc.
833	Belmont	Bt-M7	D-1171	Marietta Coal Co.
834	Carroll	Cl-M1	D-1165	Myers Mining
835	Carroll	Sk-BI1	D-1162	Buckeye Industrial Mining Co.
837	Coshocton	Cn-RF7	D-1160	Oxford Mining Co., Inc.
838	Harrison	Hn-C1	D-1169	Cravat Coal Co.
839	Harrison	Hn-C2	D-1170	Cravat Coal Co.
841	Holmes	Hs-H1	D-1176	Holmes Limestone Co.
842	Holmes	Hs-JM	D-1177	JM Mining & Reclamation
843	Jackson	Jkn-S2	D-1087	Sands Hill Coal Co., Inc.
844	Jefferson	Jfn-AN	D-1173	Anthony Mining Co., Inc.
845	Jefferson	Jfn-ST1	D-1161	Sterling Mining Co.
846	Mahoning	Mg-631	IM-1103	East Fairfield Coal Co.
847	Perry	Py-BM3	D-1157	Buckingham Coal Co., Inc.
848	Perry	Py-BM4	D-1166	Buckingham Coal Co., Inc.
850	Tuscarawas	Ts-H4	D-1149	Holmes Limestone Co.
851	Athens	As-B	D-1163	Buckingham Coal Co., Inc.
852	Belmont	Bt-M8	D-1190	Marietta Coal Co.
853	Carroll	Cl-BI1	D-1175	Buckeye Industrial Mining Co.
854	Carroll	Cl-M2	D-2014	Myers Mining
855	Columbiana	Ca-505	IM-13, IM-936	State Line Resources, Inc.
856	Columbiana	Ca-B1	D-2003	Buckeye Industrial Mining Co.
857	Columbiana	Ca-BI5	D-1179	Buckeye Industrial Mining Co.
858	Harrison	Hn-C3	D-1187	Cravat Coal Co.
859	Harrison	Hn-CC	D-1195	Copperhead Mining
860	Harrison	Hn-D	D-1181	Daron Coal Co.
861	Harrison	Hn-SM	D-1186	Melvin Schaney
862	Jackson	Jkn-S4	D-2009	Sands Hill Coal Co., Inc.
863	Jefferson	Jfn-V2	D-1185	Varkony Mining Co.
864	Mahoning	Mg-T	D-1168	Thompson Bros. Mining Co.
865	Muskingum	Mum-RF1	D-1164	Oxford Mining Co., Inc.
866	Noble	Ne-BN3	D-1194	B & N Coal, Inc.
867	Stark	Sk-B1	D-1193	Buckeye Industrial Mining Co.
868	Tuscarawas	Ts-K6	D-1183	Kimble Clay & Limestone Co.
869	Vinton	Vn-S2	D-1193	Sands Hill Coal Co., Inc.

**NUMERICAL INDEX OF OPERATORS OF MINES
SHOWN ON 1999 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY — Continued**

COAL-PREPARATION PLANTS ●

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mineral Resources Management permit number</i>	<i>Name of operator</i>
3	Belmont	Bt-936	D-0216	Marietta Coal Co.
4	Belmont	Bt-68	D-0360	Ohio Valley Coal Co.
5	Columbiana	Ca-879	D-0806	Buckeye Industrial Mining Co.
7	Coshocton	Cn-810		Conesville Coal Preparation Co.
10	Jackson	Jkn-367	D-0285	Waterloo Coal Co., Inc.
14	Meigs	Ms-293	D-0354	Southern Ohio Coal Co.
15	Monroe	Me-8	D-0422	Quarto Mining Co. (subsidiary of Consolidation Coal Co.)
16	Morgan	Ne-41	D-0378, D-0420	Central Ohio Coal Co.
20	Tuscarawas	Ts-1938	D-0264	Central Fuel Co.
21	Tuscarawas	Ts-1942	D-0287	Holmes Limestone Co.
22	Vinton	Vn-145	D-0159	Waterloo Coal Co., Inc.
24	Vinton	Vn-641	D-0169, D-0309	Sands Hill Coal Co., Inc.
30	Harrison	Hn-169	D-0424	Harrison Processing Corp.
32	Tuscarawas	Ts-HC	D-0981	Holmes Limestone Co.
33	Columbiana	Ca-505	D-0223	State Line Resources, Inc.

LIMESTONE/DOLOMITE ■

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mineral Resources Management permit number</i>	<i>Name of operator</i>
1	Adams	Ads-1	IM-237	Davon, Inc.
3	Allen	An-1	IM-485	Bluffton Stone Co.
5	Allen	An-3	IM-484	National Lime & Stone Co.
7	Allen	An-4	IM-491	Suever Stone Co., Inc.
9	Athens	As-533	IM-17	Waterloo Coal Co., Inc.
10	Auglaize	Ae-31	IM-744	Con-Ag, Inc.
11	Auglaize	Ae-10	IM-486	National Lime & Stone Co.
12	Belmont	Bt-716	IM-1	Ayers Limestone Quarry, Inc.
17	Clinton	Cln-1	IM-241	Melvin Stone Co., LLC
18	Crawford	Cd-1	IM-404	National Lime & Stone Co.
19	Darke	Dke-1	IM-362	Martin Marietta Aggregates
20	Delaware	Del-4	IM-262	Martin Marietta Aggregates
21	Delaware	Del-5	IM-207	National Lime & Stone Co.
22	Delaware	Del-3	IM-327	Martin Marietta Aggregates
23	Delaware	Del-2	IM-299	Penry Stone Co.
24	Erie	Ee-27	IM-608	Erie Blacktop, Inc.
25	Erie	Ee-11	IM-263	Rogers Group, Inc., dba Sandusky Crushed Stone
26	Erie	Ee-1	IM-310	Wagner Quarries Co.
27	Fayette	Fe-2	IM-169	Martin Marietta Aggregates
28	Fayette	Fe-1	IM-831	Melvin Stone Co., LLC
30	Franklin	Fn-2	IM-261	Martin Marietta Aggregates
31	Franklin	Fn-53	IM-185	Martin Marietta Aggregates
32	Greene	Ge-17	IM-435	Martin Marietta Aggregates
34	Greene	Ge-9	IM-364	Southdown Inc.
38	Hardin	Hdn-2	IM-443	Hardin Quarry Co., Inc.
41	Highland	Hd-2	IM-230	Davon, Inc.
42	Highland	Hd-3	IM-253	Ohio Asphaltic Limestone Corp.
43	Highland	Hd-4	IM-406	Marshall Quarry, Inc.
44	Holmes	Hs-67	IM-768, IM-3	Holmes Limestone Co.
47	Jackson	Jkn-367	D-0594, D-0968, D-1083, D-892	Waterloo Coal Co., Inc.
49	Logan	Lgn-1	IM-574	Martin Marietta Aggregates
50	Logan	Lgn-15	IM-453	C. E. Duff & Son, Inc.
51	Logan	Lgn-2	IM-494	Shelly Materials, Inc.
52	Lucas	Ls-1	IM-575	Hanson
53	Lucas	Ls-3	IM-580	Hanson
54	Lucas	Ls-2	IM-503	Stoneco, Inc.
56	Mahoning	Mg-54	IM-93	Honey Creek Stone Co.
57	Mahoning	Mg-608	IM-4	ESSROC Cement Corp.
59	Marion	Mn-2	IM-423	J. M. Hamilton & Sons Co., Inc.
60	Marion	Mn-3	IM-168	National Lime & Stone Co.
61	Marion	Mn-1	IM-250	Tri-County Limestone Co.
62	Mercer	Mr-1	IM-592	Stoneco, Inc.
63	Mercer	Mr-2	IM-430	Morrow Gravel Co.
64	Miami	Mi-1	IM-382	Piqua Materials, Inc.
66	Miami	Mi-502	IM-414	Barrett Paving Materials, Inc.

**NUMERICAL INDEX OF OPERATORS OF MINES
SHOWN ON 1999 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY — Continued**

LIMESTONE/DOLOMITE — Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mineral Resources Management permit number</i>	<i>Name of operator</i>
67	Miami	Mi-10	IM-335	C. F. Poeppelman, Inc.
70	Montgomery	My-1	IM-374	Martin Marietta Aggregates
71	Montgomery	My-23	IM-368	Martin Marietta Aggregates
72	Montgomery	My-58	IM-330	Southdown Inc.
73	Morgan	Mon-600	D-1034	Central Ohio Coal Co.
75	Muskingum	Mum-106	IM-297	Chesterhill Stone Co.
78	Muskingum	Mum-104	IM-277	Sidwell Materials
80	Noble	Ne-86	IM-70	Zerger's Quarry
82	Ottawa	Oa-6	IM-296	White Rock Quarry, L.P.
83	Ottawa	Oa-14	IM-320	Stoneco, Inc.
84	Ottawa	Oa-7	IM-440	Lafarge Corp.
85	Ottawa	Oa-1	IM-292	GenLime Group, L.P.
86	Paulding	Pg-7		Hanson
87	Paulding	Pg-1	IM-513	Lafarge Corp.
88	Paulding	Pg-2	IM-481	Stoneco, Inc.
89	Perry	Py-235	IM-515	Maxville Quarries, Inc.
91	Pike	Pke-13	IM-213	Latham Limestone, Inc.
92	Pickaway	Pky-4	IM-209	Melvin Stone Co., LLC
95	Preble	Pre-5	IM-447	Wysong Stone Co.
98	Putnam	Pm-2	IM-570	Putnam Stone Co.
101	Sandusky	Sy-5	IM-259	Gottron Bros. Co.
102	Sandusky	Sy-1	IM-537	Martin Marietta Magnesia Specialties, Inc.
103	Sandusky	Sy-4	IM-381	Millersville Lime, Inc.
104	Sandusky	Sy-3	IM-282	Millersville Lime, Inc.
106	Seneca	Sa-2	IM-352	Maple Grove Stone Co.
107	Seneca	Sa-1	IM-347	Hanson
108	Seneca	Sa-3	IM-349	Hanson
109	Seneca	Sa-8	IM-313	North Shore Stone Quarries, Inc.
110	Shelby	Shy-6, Shy-17	IM-389	Miami River Stone Co.
111	Shelby	Shy-16	IM-411	Miami River Stone Co.
112	Shelby	Shy-15	IM-387	Spring Creek Corp.
117	Tuscarawas	Ts-1818	IM-9	Kimble Clay & Limestone Co.
119	Union	Un-1	IM-208	Shelly Materials, Inc.
120	Union	Un-2	IM-236	Shelly Materials, Inc.
121	Van Wert	Vt-3	IM-495	Stoneco, Inc.
122	Van Wert	Vt-7	IM-642	Ridge Township Quarry
123	Van Wert	Vt-1	IM-500	Suever Stone Co., Inc.
124	Vinton	Vn-174	D-0309	Clinton Stone, Inc.
129	Wood	Wd-5	IM-473	Custar Stone Co.
130	Wood	Wd-1	IM-548	MacRitchie Materials, Inc.
131	Wood	Wd-6	IM-480	Stoneco, Inc.
132	Wood	Wd-11	IM-475	Stoneco, Inc.
133	Wyandot	Wt-3	IM-298	McCarthy Stone Quarry
134	Wyandot	Wt-1	IM-405	National Lime & Stone Co.
135	Wyandot	Wt-8	IM-273	Wyandot Dolomite, Inc.
142	Greene	Ge-25	IM-437	Martin Marietta Aggregates
143	Montgomery	My-73	IM-330	Martin Marietta Aggregates
147	Guernsey, Muskingum	Gy-309	IM-1030	King Limestone, Inc.
148	Vinton	Vn-190	D-0761	Quality Stone Co.
149	Hancock	Hk-7	IM-1002	National Lime & Stone Co.
152	Belmont	Bt-1190	IM-1089	Frank Widmor Coal Co., Inc.
153	Coshocton	Cn-A	IM-1011	Jim Romig Excavating
154	Franklin	Fn-43	IM-188	Olen Corp.
155	Greene	Ge-45	IM-364	Martin Marietta Aggregates
156	Hardin	Hdn-S	IM-1034	C. E. Duff & Son, Inc.
158	Jackson	Jkn-SH	IM-1068	Sands Hill Coal Co., Inc.
159	Lawrence	Le-B	IM-1188, D-0746	Belville Mining Co., Inc.
160	Lucas	Ls-12	IM-953	Barrett Paving Materials, Inc.
161	Mahoning	Mg-629	IM-1008	Blum Mining
162	Mahoning	Mg-EM	IM-1056	ESSROC Cement Corp.
163	Monroe	Me-C	IM-1088	Christman Quarry
164	Monroe	Me-509	IM-1094	Rubel Quarry, Inc.
167	Noble	Ne-S	IM-913	Sharon Stone Co.
168	Perry	Py-343	IM-1061	Maxville Quarries, Inc.
170	Tuscarawas	Ts-1982	IM-621	L & M Mineral Co.

**NUMERICAL INDEX OF OPERATORS OF MINES
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LIMESTONE/DOLOMITE — Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mineral Resources Management permit number</i>	<i>Name of operator</i>
171	Mahoning	Mg-631	IM-1103	East Fairfield Coal Co.
173	Adams	Ads-H	IM-805	Waterland Trucking Service, Inc.
174	Erie	Ee-K	IM-727	Kellstone, Inc.
175	Highland	Hd-D	IM-1170	Martin Marietta Aggregates
176	Harrison, Jefferson	Jfn-K	IM-1164	K.C.C.I.
177	Miami	Mi-BPM	IM-1169	Barrett Paving Materials, Inc.
178	Montgomery	My-Q	IM-860	Quarry Trails
179	Noble	Ne-B	IM-897	B & N Coal, Inc.
180	Ottawa	Oa-18	IM-635	Fox Stone Products, Inc.
181	Tuscarawas	Ts-B	IM-49	Belden Brick Co.
182	Vinton	Vn-193		Quality Stone Co.
183	Wood	Wd-14	IM-1157	Precision Aggregate, Inc.
184	Brown	Bn-EC	IM-1195	Davon, Inc.
185	Muskingum	Mum-907	IM-1200	Pleasant Valley Limestone
186	Muskingum	Mum-SB	IM-1212, IM-1269	Sidwell Materials
187	Tuscarawas	Ts-1517	IM-46	Belden Brick Co.
188	Lucas	Ls-13	IM-492	Seaway Sand & Stone, Inc.
191	Tuscarawas	Ts-BB	IM-1221	Belden Brick Co.
192	Columbiana	Ca-BIM	IM-1271	Buckeye Industrial Mining Co.
193	Hamilton	Hmn-72	IM-1264	Rumpke Mountain Mining Co.
194	Noble	Ne-K	IM-1254	King Quarries, Inc.
195	Belmont	Bt-N	IM-1283	Northshore Coal, Inc.
196	Hancock	Hk-A	IM-1299	Stansley Mineral Resources
197	Noble	Ne-K1	IM-1292	King Quarries, Inc.
198	Ottawa	Oa-BC	IM-1288	Baycliffs Corp.
199	Ross	Rs-MC1	IM-1298	Melvin Stone Co., LLC
200	Tuscarawas	Ts-BJ	IM-1285	Blue Jay Enterprises of Ts. Co., Inc.
201	Belmont	BT-B	D-998	Northshore Coal, Inc.
202	Greene	Ge-8	IM-364	Southdown Inc.
203	Muskingum	Mum-SD	IM-1313	Sidco Development, Inc.
205	Stark	Sk-208	D-1015, D-1144	ENZ, Inc.
206	Tuscarawas	Ts-1939	IM-47	Belden Brick Co.
207	Tuscarawas	Ts-520	IM-214	Blue Jay Enterprises of Ts. Co., Inc.
209	Tuscarawas	Ts-1646	IM-44	Belden Brick Co.
210	Carroll	Cl-TC	IM-1319	TCNC Industries, Inc.
211	Hamilton	Hmn-GR	IM-1363	Gray Road Fill, Inc.
212	Mahoning	Mg-L	IM-1353	LaFarge Corp.
213	Shelby	Sh-SC1	IM-2017	Spring Creek Corp.
214	Tuscarawas	Ts-S2	IM-1356	Sidco Development, Inc.
215	Wood	Wd-S	IM-2005	Mark Schaffer Excavating & Trucking, Inc.
216	Clark	Ck-501	IM-340	Demmy Construction, Inc.

SAND AND GRAVEL DREDGING OPERATION △

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mineral Resources Management permit number</i>	<i>Name of operator</i>
1	Lake Erie	Ee-dredge		Erie Sand & Gravel Co.
2	Lake Erie	Lke-dredge		Osborne Materials Co.

SAND AND GRAVEL ▲

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mineral Resources Management permit number</i>	<i>Name of operator</i>
2	Allen	An-15	IM-721	Ward Materials, Inc.
6	Ashland	Ald-9	IM-745	Bartley & Bolin Excavating
8	Ashland	Ald-7	IM-392	Young's Sand & Gravel Co.
9	Ashtabula	Asa-10	IM-198	Frye Sand & Gravel, Inc.
10	Ashtabula	Asa-14	IM-563	Janson's Soil Service, Inc.
14	Ashtabula	Asa-12	IM-1130	Nelson Sand & Gravel, Inc.
15	Ashtabula	Asa-15	IM-783	R. W. Sidley, Inc.
19	Athens	As-588	IM-630	Black Top Contracting, Inc.
21	Athens	As-1161	IM-97	Lake Hope Asphalt, Inc.
23	Auglaize	Ae-23	IM-508	Joseph Sand & Gravel, Inc.

**NUMERICAL INDEX OF OPERATORS OF MINES
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SAND AND GRAVEL — Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mineral Resources Management permit number</i>	<i>Name of operator</i>
24	Auglaize	Ae-30	IM-598	National Lime & Stone Co.
25	Auglaize	Ae-16	IM-595	Quality Ready Mix, Inc.
26	Belmont	Bt-74	IM-288	Tri-State Asphalt Products
28	Butler	Br-36	IM-649	Bill D. Colwell
29	Butler	Br-5	IM-153	Martin Marietta Aggregates
30	Butler	Br-35	IM-200	Martin Marietta Aggregates
31	Butler	Br-48	IM-562	Broshear Contractors, Inc.
32	Butler	Br-50	IM-739	Dingledine Basic Materials, Inc.
33	Butler	Br-14	IM-147	Martin Marietta Aggregates
34	Butler	Br-29	IM-149	Martin Marietta Aggregates
37	Butler	Br-40	IM-493	Gaston Bowling, Inc.
38	Butler	Br-52	IM-814	Shamrock Materials, Inc.
39	Butler	Br-15	IM-316	Mecco, Inc.
41	Butler	Br-6	IM-177	Moraine Materials Co., Inc.
42	Butler	Br-3	IM-719	Roy B. Schweitzer, dba The Gravel Co.
44	Butler	Br-47	IM-111	Watson Gravel, Inc.
45	Butler	Br-38	IM-218	Welch Sand & Gravel, Inc.
47	Carroll	Cl-204	IM-554	Oneida Sand & Gravel, Inc.
48	Champaign	Cpn-1	IM-371	Morrow Gravel Co.
49	Champaign	Cpn-21	IM-616	D. & W. Sand & Gravel
50	Champaign	Cpn-22	IM-889	Mechanicsburg Sand & Gravel, Inc.
51	Champaign	Cpn-20	IM-482	Moore's Excavating Co.
52	Clark	Ck-13	IM-366	Martin Marietta Aggregates
54	Clark	Ck-502	IM-375	Demmy Sand & Gravel
57	Clark	Ck-3	IM-463	Enon Washed Sand & Gravel Co.
58	Clark	Ck-25	IM-358	Shelly Materials, Inc.
59	Clermont	Ct-9	IM-526	Barrett Paving Materials, Inc.
61	Clermont	Ct-7	IM-432	Kipp's Gravel Co., Inc.
68	Columbiana	Ca-881	IM-611	X L Sand & Gravel
69	Coshocton	Cn-718	IM-227	Apache Aggregate & Paving Co.
70	Coshocton	Cn-783	IM-717	Apache Aggregate & Paving Co.
71	Coshocton	Cn-694	IM-293	Shelly Materials, Inc.
72	Coshocton	Cn-624	IM-243	Shady Bend Sand & Gravel
80	Darke	Dke-4	IM-433	Foureman's Sand & Gravel, Inc.
81	Darke	Dke-10	IM-326	Hollinger Excavating
82	Defiance	De-2	IM-765	Hillsdale Sand & Gravel, Inc.
83	Erie	Ee-18	IM-676	Erie Materials, Inc.
84	Erie	Ee-29		Jarrett Sand Co.
92	Fairfield	Fd-13	IM-848	Shelly Materials, Inc.
94	Franklin	Fn-36	IM-302	Agg Rok Materials
95	Franklin	Fn-6	IM-185	Martin Marietta Aggregates
96	Franklin	Fn-23	IM-183	Martin Marietta Aggregates
97	Franklin	Fn-14	IM-832	D.B.M. Materials, LLC
98	Franklin	Fn-52	IM-191	JP Sand & Gravel Co.
100	Franklin	Fn-11	IM-234	Mason's Sand & Gravel Co.
101	Franklin	Fn-24	IM-266	S & S Aggregate, Inc.
102	Franklin	Fn-43	IM-188	Olen Corp.
108	Geauga	Gea-29	IM-215	Haueter Sand & Gravel, Inc.
109	Geauga	Gea-35	IM-321	Teague Gravel Co., Inc.
110	Greene	Ge-33	IM-379	Martin Marietta Aggregates
112	Clark, Greene	Ge-4	IM-394	Hilltop Basic Resources, Inc.
115	Greene	Ge-36	IM-305	Phillips Sand & Gravel
117	Greene	Ge-10	IM-518	Xenia Sand, Gravel, & Asphalt Co.
118	Hamilton	Hmn-37	IM-170	Martin Marietta Aggregates
120	Hamilton	Hmn-54	IM-710	Ashcraft Sand & Gravel, Inc.
121	Hamilton	Hmn-44	IM-120	Crosby Gravel
123	Hamilton	Hmn-50	IM-205	James Bunnell, Inc.
124	Hamilton	Hmn-59	IM-812, IM-815	James Bunnell, Inc.
126	Hamilton	Hmn-3	IM-148, IM-137, IM-821	Martin Marietta Aggregates
127	Hamilton	Hmn-5	IM-148	Martin Marietta Aggregates
131	Hamilton	Hmn-68	IM-747	Watson Gravel, Inc.
132	Hamilton	Hmn-46	IM-396	Eaton Sand & Gravel Co.
134	Hamilton	Hmn-71	IM-771	Powell Gravel & Topsoil, Inc.
135	Hamilton	Hmn-17	IM-295	Harrison Sand & Gravel Co.

**NUMERICAL INDEX OF OPERATORS OF MINES
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SAND AND GRAVEL — Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mineral Resources Management permit number</i>	<i>Name of operator</i>
137	Hamilton	Hmn-67	IM-529	Leonard Sand & Gravel
139	Hamilton	Hmn-10	IM-226	Rack Sand, Inc.
141	Hamilton	Hmn-28	IM-353	Roy B. Schweitzer, dba The Gravel Co.
142	Hamilton	Hmn-60	IM-761	Watson Gravel, Inc.
143	Hamilton	Hmn-42	IM-823	Welch Sand & Gravel, Inc.
144	Hamilton	Hmn-48	IM-220	Welch Sand & Gravel, Inc.
151	Hocking	Hg-262	IM-41	Hocking Valley Concrete, Inc.
152	Hocking	Hg-301	IM-458	Muskingum River Gravel Co.
153	Holmes	Hs-82	IM-707	Menuet Bros. Sand & Gravel, Inc.
154	Holmes	Hs-511	IM-1048, IM-1240	Feikert Sand & Gravel, Inc.
160	Knox	Kx-7	IM-235	Shelly Materials, Inc.
161	Knox	Kx-16	IM-793	Olen Corp.
162	Knox	Kx-5	IM-1307	Small's Sand & Gravel, Inc.
163	Knox	Kx-3	IM-300	Sant Sand & Gravel, Inc.
165	Knox	Kx-15	IM-967	Small's Sand & Gravel, Inc.
166	Lake	Lke-7	IM-162	R. W. Sidley, Inc.
167	Lawrence	Le-430	IM-844	B & L Sand Co.
170	Lawrence	Le-426	IM-856	Burlington Sand & Gravel Co.
174	Licking	Lg-2	IM-184	Doug Mill
176	Licking	Lg-31	IM-246	Olen Corp.
179	Licking	Lg-10	IM-217	Van Wey Sand & Gravel, Inc.
182	Logan	Lgn-31	IM-454	C. E. Duff & Son, Inc.
183	Logan	Lgn-39	IM-887	C. E. Duff & Son, Inc.
189	Logan	Lgn-6	IM-459	Neer's Sand & Gravel
191	Lorain	Ln-12	IM-731	Guy Schieve
195	Lucas	Ls-13	IM-492	Seaway Sand & Stone, Inc.
196	Mahoning	Mg-632	IM-808	Solomon's Mines, Inc.
197	Marion	Mn-16	IM-171	Fleming Construction Co., Inc.
198	Marion	Mn-4	IM-290	Penry Stone Co.
200	Marion	Mn-10	IM-196	Shelly Materials, Inc.
203	Medina	Ma-20	IM-448	Baker Sand, Inc.
206	Medina	Ma-22	IM-425, IM-442, IM-650, IM-651	Seville Sand & Gravel, Inc.
209	Meigs	Ms-205	IM-30	Martin Marietta Aggregates
211	Meigs	Ms-301	IM-619	Meigs County Commissioners
212	Meigs	Ms-298	IM-32	Shelly Materials, Inc.
217	Miami	Mi-501		New Carlisle Sand & Gravel Co.
219	Miami	Mi-3	IM-462, IM-658	Martin Marietta Aggregates
221	Miami	Mi-9	IM-408	Wise Gravel
222	Miami	Mi-4	IM-472	Fenner Sand & Gravel, Inc.
224	Montgomery	My-66	IM-677	Martin Marietta Aggregates
225	Montgomery	My-65	IM-594	Broadway Sand & Gravel, Inc.
232	Montgomery	My-19	IM-401, IM-916	Hilltop Basic Resources, Inc.
233	Montgomery	My-52	IM-348	Miller Bros. Gravel, Inc.
236	Montgomery	My-55	IM-571	Taylorville Rd. Hardfill
238	Montgomery	My-61	IM-468	Tipp Stone Co., Inc.
239	Montgomery	My-41	IM-360	Moraine Materials Co., Inc.
240	Morgan	Mon-588	IM-35	Chesterhill Stone Co.
242	Morrow	Mw-10	IM-258	Chesterhill Sand & Gravel Co., Inc.
243	Muskingum	Mum-863	IM-264	Shelly Materials, Inc.
244	Muskingum	Mum-799	IM-317	Shelly Materials, Inc.
247	Muskingum	Mum-228	IM-421	Muskingum River Gravel Co.
248	Muskingum	Mum-216	IM-689	Salt Creek Materials, James Sand & Gravel
251	Pickaway	Pky-1	IM-428	Six-B, Inc.
252	Pike	Pke-26	IM-142	Valley Materials Co.
253	Pike	Pke-23	IM-242	Davon, Inc.
254	Pike	Pke-30	IM-786	South Central Sand & Gravel
255	Pike	Pke-24	IM-222	Davon, Inc.
256	Portage	Pe-50	IM-96	Beck Sand & Gravel, Inc.
257	Portage	Pe-15	IM-104	Karl Brugmann Sand & Gravel, Inc.
258	Portage	Pe-9	IM-119	Oscar Brugmann Sand & Gravel, Inc.
259	Portage	Pe-17	IM-123	Charlestown Sand & Gravel, Inc.
260	Portage	Pe-84	IM-868	Twinsburg Development Corp.
261	Portage	Pe-45	IM-139	R. A. Cruise Sand & Gravel, Inc.
262	Portage	Pe-56	IM-127	Hilltop Aggregate, Inc.
264	Portage	Pe-10	IM-138	Hugo Sand Co.

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SAND AND GRAVEL — Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mineral Resources Management permit number</i>	<i>Name of operator</i>
265	Portage	Pe-63	IM-82	Jefferson Materials Co.
268	Portage	Pe-40	IM-190	Lakeside Sand & Gravel Co.
272	Portage	Pe-39	IM-1078	Miller Sand & Gravel, Inc.
273	Portage	Pe-85	IM-700	Rockwell Sand & Gravel, Inc.
274	Portage	Pe-60	IM-78	Schloss Materials Co.
275	Portage	Pe-18	IM-193	Sober Sand & Gravel Co.
276	Portage	Pe-36	IM-90	Solon Excavators Sand & Gravel, Inc.
277	Portage	Pe-68	IM-660, IM-1047, IM-1107, IM-1124	Lafarge Corp.
280	Portage	Pe-64	IM-1017	Rainbow Sand & Gravel, Inc.
281	Portage	Pe-59	IM-210	S & S Aggregate, Inc.
282	Portage	Pe-67	IM-202	S & S Aggregate, Inc.
284	Preble	Pre-7	IM-306	Southern Ohio Aggregates, Inc.
285	Preble	Pre-4	IM-477	Wysong Gravel Co.
286	Preble	Pre-6	IM-478	Wysong Gravel Co.
287	Richland	Rd-4	IM-279, IM-1255	D. H. Bowman & Sons, Inc.
289	Richland	Rd-18	IM-670	Ganges Gravel Co.
290	Richland	Rd-14	IM-436	John L. Garber Materials, Inc.
292	Richland	Rd-5	IM-470	S & S Aggregate, Inc.
303	Scioto	So-98	IM-474	E. E. Blair Construction Co.
304	Scioto	So-83	IM-211	Cunningham Asphalt Paving, Inc.
305	Scioto	So-78		E. A. Schilling & Sons, Inc.
306	Scioto	So-79	IM-221	ATS Enterprises
311	Shelby	Shy-17	IM-389	Miami River Stone Co.
312	Shelby	Shy-13	IM-412	Miami River Stone Co.
314	Shelby	Shy-11	IM-743	Spring Creek Corp.
315	Shelby	Shy-18	IM-388	Spring Creek Corp.
316	Stark	Sk-N	IM-156	Northern Ohio Paving Co.
318	Stark	Sk-681	IM-164	Central Allied Enterprises, Inc.
319	Stark	Sk-689	IM-173	Central Allied Enterprises, Inc.
320	Stark	Sk-694	IM-858	A. J. Diana Sons, Inc.
325	Stark	Sk-607	IM-102	Central Allied Enterprises, Inc.
326	Stark	Sk-165	IM-192	Oster Sand & Gravel, Inc.
327	Summit	St-52	IM-900	Flesher Sand & Gravel, Inc.
333	Summit	St-24	IM-239	Riverside Sand & Gravel Co., Inc.
336	Summit	St-44	IM-178	S & S Aggregate, Inc.
340	Trumbull	Tl-12	IM-131	Samco, Inc.
343	Tuscarawas	Ts-1826	IM-88	Soehnlen Bros. Sand & Gravel, Inc.
344	Tuscarawas	Ts-1771	IM-77	Spring Industries, Inc.
346	Tuscarawas	Ts-111	IM-55	Stewart & Reichman, Inc.
347	Tuscarawas	Ts-69	IM-51	Stocker Sand & Gravel Co.
348	Tuscarawas	Ts-125	IM-50	Stocker Sand & Gravel Co.
349	Warren	Wan-38	IM-615	Martin Marietta Aggregates
352	Warren	Wan-41	IM-629	Carl E. Oeder & Sons Sand & Gravel
356	Warren	Wan-47	IM-846	C. & S. Contractors
363	Warren	Wan-10	IM-465	Watson Gravel, Inc.
364	Washington	Wn-55	IM-669	Beverly Slag Co.
365	Washington	Wn-508	IM-57	Briggs Sand & Gravel, Inc.
367	Washington	Wn-38	IM-701	Muskingum River Gravel Co.
369	Washington	Wn-510	IM-25	Trout Sand & Gravel Co.
372	Wayne	We-11	IM-547	Prairie Lane Sand & Gravel Co.
373	Wayne	We-7	IM-471	Rupp Construction, Inc.
374	Wayne	We-15	IM-398	Zollinger Sand & Gravel Co.
375	Williams	Ws-6	IM-497	Stoneco, Inc.
376	Williams	Ws-9	IM-498	Stoneco, Inc.
377	Williams	Ws-11	IM-509, IM-661	Weber Sand & Gravel, Inc.
378	Williams	Ws-14	IM-614	Winzeler Excavating Co.
379	Wyandot	Wt-4	IM-520	Precision Aggregate, Inc.
380	Wyandot	Wt-15	IM-376	National Lime & Stone Co.
381	Wyandot	Wt-18	IM-551	National Lime & Stone Co.
382	Wyandot	Wt-17	IM-604	Kirby's Sand & Gravel, Inc.
385	Clark	Ck-501	IM-340	Demmy Construction, Inc.
386	Stark	Sk-203	IM-654	American Sand & Gravel, Inc.
387	Portage	Pe-95	IM-212	American Sand & Gravel, Inc.
389	Tuscarawas	Ts-1976	IM-942, IM-1235	Goshen Sand & Gravel
390	Miami	Mi-T	IM-696	Lloyd B. Fry

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SAND AND GRAVEL — Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mineral Resources Management permit number</i>	<i>Name of operator</i>
391	Warren	Wan-B	IM-679	Little Miami Sand & Gravel
395	Scioto	So-100	IM-950	Scioto Valley Resources
401	Fairfield	Fd-14	IM-933	Paul D. Beery Trucking Co.
403	Greene	Ge-40	IM-923	R. J. Martin Service & Excavating
404	Greene	Ge-42	IM-954	Martin Marietta Aggregates
405	Greene	Ge-32	IM-400	Martin Marietta Aggregates
407	Hamilton	Hmn-69	IM-969	Watson Gravel, Inc.
408	Knox	Kx-17	IM-968	Small's Sand & Gravel, Inc.
409	Richland	Rd-20	IM-617	Bartley & Bolin Excavating
412	Ashland	Ald-15	IM-944	Young's Sand & Gravel Co.
413	Ashtabula	Asa-18	IM-949	Simak Trucking, Inc.
415	Geauga	Gea-9	IM-132	Soltis Sand & Gravel
416	Holmes	Hs-96	IM-997	Spring Run Gravel
417	Huron	Hrn-16	IM-975	Erie Blacktop, Inc.
419	Licking	Lg-504	IM-991	Gary Roberts Excavating
420	Logan	Lgn-36	IM-1007	C. E. Duff & Son, Inc.
423	Marion	Mn-19	IM-990	Fleming Construction Co., Inc.
424	Monroe	Me-508	IM-1000	Ohio-West Virginia Excavation
427	Summit	St-54	IM-934	R. & S., Inc.
428	Tuscarawas	Ts-2001	IM-1004	Newton Asphalt Paving, Inc.
429	Warren	Wan-46	IM-842	Little Miami Sand & Gravel
430	Warren	Wan-50	IM-1006	L & I Natural Resources, Inc.
432	Washington	Wn-54	IM-383	Atlas Towing Co.
435	Stark	Sk-173	IM-879	Allied Corp., Inc.
437	Clark	Ck-7	IM-449	City of Springfield
438	Coshocton	Cn-828	IM-1026	William Albert, Inc.
440	Gallia	Ga-626	IM-1046	Cremeans Concrete & Supply
441	Greene	Ge-38	IM-333	Martin Marietta Aggregates
444	Logan	Lgn-12	IM-1071	C. E. Duff & Son, Inc.
446	Miami	Mi-12	IM-467	Tipp Stone Co., Inc.
447	Miami	Mi-504	IM-1032	Shelly Materials, Inc.
448	Muskingum	Mum-262	IM-422	Muskingum River Gravel Co.
451	Portage	Pe-89	IM-1142	Green Oaks Potting Products, Inc.
452	Ross	Rs-M	IM-114	Muskingum River Gravel Co.
453	Stark	Sk-241	IM-582	Lafarge Corp.
455	Stark	Sk-243	IM-908	American Sand & Gravel, Inc.
458	Athens	As-595	IM-1083	Cochran Transportation Services, Inc.
459	Athens	As-W	IM-979	Olen Corp.
460	Butler	Br-S	IM-1053	Southern Ohio Aggregates, Inc.
461	Clark	Ck-28	IM-1100	Barrett Paving Materials, Inc.
463	Columbiana	Ca-982	IM-1108	Leetonia Sand & Gravel Co., Inc.
465	Franklin	Fn-58	IM-1023	Olen Corp.
466	Gallia	Ga-O	IM-1028	Ours Sand & Gravel
467	Hamilton	Hmn-AS	IM-1106	Allgeier & Son, Inc.
468	Hamilton	Hmn-D	IM-1079	Martin Marietta Aggregates
470	Holmes	Hs-J	IM-1043	S & S Transport, Inc.
472	Lucas	Ls-G	IM-1090	H. T. Griffin Excavating, Inc.
474	Madison	Mdn-11	IM-1063	Tuffco Sand & Gravel, Inc.
475	Mahoning	Mg-630	IM-1091	Wallace Road Sand & Gravel
476	Mahoning	Mg-629	IM-1008	Blum Mining
480	Pickaway	Pky-H	IM-1039	William A. Hoffman, Jr.
481	Pickaway	Pky-R	IM-993, IM-1204	Melvin Stone Co., LLC
482	Portage	Pe-61	IM-1064	Red Brush Peat Co.
483	Portage	Pe-92	IM-522	Don Wartko Construction, Inc.
488	Preble	Pre-9	IM-1095	Loxley Aggregates, Inc.
490	Ross	Rs-27	IM-1098	Shelly Materials, Inc.
491	Ross	Rs-H	IM-1052	Haubeil & Sons Asphalt & Materials, Inc.
494	Shelby	Shy-SC	IM-1018	Spring Creek Corp.
495	Stark	Sk-M	IM-1031	Massillon Materials, Inc.
496	Summit	St-55	IM-589	Alden Sand & Gravel Co.
500	Tuscarawas	Ts-2018	IM-1076	State Rte. 416 Sand & Gravel
501	Warren	Wan-M	IM-728, IM-1065	Morrow Gravel Co.
502	Warren	Wan-M1	IM-1051	Morrow Gravel Co.
503	Warren	Wan-M2	IM-837	Morrow Gravel Co.
504	Washington	Wn-1007	IM-1042	Mark Williams Blacktop Co., Inc.

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<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mineral Resources Management permit number</i>	<i>Name of operator</i>
506	Williams	Ws-T	IM-1022	Stoneco, Inc.
508	Ashland	Ald-G	IM-1121	Joyce A. Good
509	Ashland	Ald-16	IM-1120	Bartley & Bolin Excavating
510	Ashtabula	Asa-N	IM-1109	Nelson Sand & Gravel, Inc.
517	Geauga	Gea-N	IM-1123	Newbury Sand & Gravel
518	Geauga	Gea-TK	IM-902	T & K Kuhnle Co.
519	Hamilton	Hmn-B	IM-1139	James Bunnell, Inc.
520	Hamilton	Hmn-C	IM-1132	Allgeier & Son, Inc.
521	Hamilton	Hmn-AS1	IM-797	Allgeier & Son, Inc.
523	Hocking	Hg-329	IM-1112	Kilbarger Construction, Inc.
528	Portage	Pe-SSC	IM-318	Sunshine Sand Co.
529	Portage	Pe-96	IM-792	Don's Dozer Service, Inc.
530	Ross	Rs-R	IM-1143	Six-B, Inc.
533	Washington	Wn-1008	IM-1111	Grimes Excavating
534	Washington	Wn-1009	IM-525	Mark Williams Blacktop Co., Inc.
535	Wayne	We-23	IM-1136	Buckeye Excavating Development, Inc.
538	Columbiana	Ca-993	IM-1180	Willowbrook
539	Columbiana	Ca-351	IM-634	Inland South Aggregates
541	Fairfield	Fd-16'	IM-1156	James E. Downard
544	Gallia	Ga-J	IM-1145	Jaymar, Inc.
545	Geauga	Gea-H	IM-510	Haueter Sand & Gravel, Inc.
546	Greene	Ge-46	IM-1149	Don Thompson Excavating, Inc.
547	Greene	Ge-R	IM-829	Richards Service Garage
548	Greene	Ge-47	IM-751	M. J. Coates Construction Co.
549	Greene	Ge-W	IM-645	Joann O. Weddle
550	Greene	Ge-G	IM-655	James D. Graham
551	Hamilton	Hmn-S	IM-746	Southern Ohio Aggregates, Inc.
552	Hamilton	Hmn-SO	IM-720	Southern Ohio Aggregates, Inc.
553	Hardin	Hdn-H	IM-864	Norman Harpster
558	Medina	Ma-23	IM-1177	Baker Sand, Inc.
559	Meigs	Ms-L	IM-1159	Letart Corp.
560	Meigs	Ms-308	IM-1174	Letart Corp.
561	Montgomery	My-CW	IM-878	Carter & Carter, Inc.
562	Montgomery	My-R	IM-539	John P. Raisch, Inc.
565	Pickaway	Pky-W	IM-1176	Gene T. Wilson
568	Portage	Pe-101	IM-1154	D & K Materials, Inc.
569	Portage	Pe-SM	IM-499	Schloss Materials Co.
570	Portage	Pe-L	IM-154	Lucky Sand & Gravel Co.
571	Preble	Pre-AAC	IM-779	U.S. Aggregates
573	Ross	Rs-E	IM-1168	David E. Edgington
575	Ross	Rs-P	IM-122	Mark E. Scott
576	Scioto	So-B	IM-705	Boone Coleman Construction, Inc.
577	Shelby	Shy-SS	IM-438	Miami River Stone Co.
578	Stark	Sk-MW	IM-1171	Central Allied Enterprises, Inc.
579	Stark	Sk-W	IM-867	Ralph C. Wagner & Sons
581	Stark	Sk-R	IM-697	Oster Sand & Gravel, Inc.
582	Stark	Sk-SI	IM-588	Spring Industries, Inc.
583	Summit	St-50	IM-722	A-1 All Ohio Sand & Gravel Co.
584	Trumbull	Tl-16	IM-1158	Nick's Trucking
586	Tuscarawas	Ts-2036	IM-1155	Oster Sand & Gravel, Inc.
588	Tuscarawas	Ts-SI	IM-569	L & M Mineral Co.
589	Warren	Wan-7	IM-151	Embro, Inc.
590	Washington	Wn-1010	IM-1163	M & J Sand & Gravel, Inc.
591	Wyandot	Wt-K	IM-943	Kirby's Sand & Gravel, Inc.
593	Ashtabula	Asa-20	IM-1198	Kinsman Sand & Gravel Co.
595	Cuyahoga	Cya-42	IM-686	Boyas Excavating, Inc.
596	Hocking	Hg-G	IM-1201	Good Builders
597	Lake	Lke-C	IM-1215	Cashen, Inc.
598	Lake	Lke-D	IM-1187	DeMita Sand & Gravel, Inc.
600	Licking	Lg-W	IM-1213	Eagle Material
602	Mahoning	Mg-631	IM-1103	East Fairfield Coal Co.
605	Portage	Pe-102	IM-1184	GANS Ltd.
606	Ross	Rs-T	IM-1189	Tackett Builders
607	Stark	Sk-BE	IM-1202	Beaver Excavating, Inc.
608	Stark	Sk-HS	IM-1193	Heiser Sand & Gravel Corp.

**NUMERICAL INDEX OF OPERATORS OF MINES
SHOWN ON 1999 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY — Continued**

SAND AND GRAVEL — Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mineral Resources Management permit number</i>	<i>Name of operator</i>
609	Stark	Sk-HS1	IM-1203	Heiser Sand & Gravel Corp.
610	Stark	Sk-1017	IM-1186	National Aggregates, Inc.
611	Trumbull	TL-C	IM-1190	Center West Enterprises, Inc.
612	Tuscarawas	Ts-A	IM-1218	Acme Sand & Gravel
613	Wayne	We-24	IM-1211	E. A. Construction, Inc.
615	Portage	Pe-98	IM-1231	Johnson Road Sand & Gravel
616	Ashland	Ald-Y	IM-1216	Young's Sand & Gravel Co.
617	Ashtabula	Asa-21	IM-1239	Sunrise Sand & Gravel
619	Champaign	Cpn-25	IM-1337	Moore's Excavating Co.
620	Clark	Ck-29	IM-1233	Moore's Excavating Co.
622	Fulton	Ftn-M	IM-1246	Al Mackey Enterprises, Inc.
623	Geauga	Gea-43	IM-1230	Solon Excavators Sand & Gravel, Inc.
625	Lake	Lke-CIR	IM-1243	C.I.R., Inc.
628	Portage	Pe-OB	IM-1241	Oscar Brugmann Sand & Gravel, Inc.
630	Scioto	So-102	IM-1250	T. T. & K. Construction, Inc.
631	Stark	Sk-CA	IM-1234	Central Allied Enterprises, Inc.
633	Williams	Ws-21	IM-1225	Thiel Construction Co.
634	Williams	Ws-22	IM-1222	Heer Excavating, Inc.
635	Ashtabula	Asa-C	IM-1278	Clemson Excavating, Inc.
636	Columbiana	Ca-S	IM-1258	Solomon's Mines, Inc.
637	Erie	Ee-27	IM-608	Erie Blacktop, Inc.
639	Fulton	Ftn-M1	IM-1275	Al Mackey Enterprises, Inc.
641	Hamilton	Hmn-G	IM-1270	Golsch Construction, Inc.
642	Hamilton	Hmn-JC	IM-1267	Joe E. Carter
644	Knox	Kx-1	IM-269	Ogleby Norton Industrial Sands, Inc.
646	Lucas	Ls-M	IM-1261	Al Mackey Enterprises, Inc.
647	Morgan	Mon-L	IM-1266	Link Trucking Co.
648	Pickaway	Fn-C	IM-1265	Complete Resources Co.
650	Ashtabula	Asa-F	IM-1289	Frye Sand & Gravel, Inc.
651	Ashtabula	Asa-M	IM-1301	Mathews Sand & Gravel
653	Columbiana	Ca-W	IM-1279	Carl Walter
654	Fulton	Ftn-BL1	IM-1282	B & L Excavating
655	Fulton	Ftn-M2	IM-1294	Al Mackey Enterprises, Inc.
656	Highland	Hd-L	IM-1297	LaMar Sand & Fill, Ltd.
657	Hocking	Hg-HV	IM-1284	Hocking Valley Mulch
658	Licking	Lg-S	IM-1281	Sleepy Hollow Sand & Gravel, Redskin Transport LLC
659	Lucas	Ls-SMB	IM-1290	S. & M. Builders, Inc.
661	Portage	Pe-LS	IM-1293	Lakeside Sand & Gravel Co.
663	Scioto	So-BT	IM-1286	Big T Mining
664	Scioto	So-DGM	IM-1280	D.G.M., Inc.
665	Williams	Ws-N	IM-1291	Andy Nixon Contractors, Inc.
666	Wood	Wd-14	IM-1157	Precision Aggregate, Inc.
667	Butler	Br-57		Watson Gravel, Inc.
668	Coshocton	Cn-C	IM-1311	County Line Concrete & Supply Co.
669	Logan	Lgn-B	IM-1309	Boyd Excavating
670	Holmes	Hs-C	IM-1303	Craigton Shale Co.
671	Pickaway	Pky-DC	IM-1316	Darby Creek Excavating
672	Fulton	Ftn-SI	IM-1308	Sandco, Inc.
673	Portage	Pe-B1	IM-1296	Blue Stone Sand & Gravel, Inc.
674	Portage	Pe-B2	IM-1305	Blue Stone Sand & Gravel, Inc.
675	Washington	Wn-C	IM-1315	Chesterhill Stone Co.
676	Portage	Pe-M	IM-1312	Mills Rock, Sand, & Soil, Inc.
677	Ashtabula	Asa-ST	IM-1349	Joe Simak & Sons Trucking
678	Fulton	Ftn-SA	IM-1335	Sandman Trucking, Inc.
679	Hocking	Hg-HA	IM-1320	Harden Agricultural Lime & Reclm. Svs., Inc.
680	Hamilton	Hmn-P	IM-1333	Powell Gravel & Topsoil, Inc.
681	Lucas	Ls-AM	IM-1318	Al Mackey Enterprises, Inc.
682	Lucas	Ls-GB	IM-1323	Gary L. Brown
683	Lucas	Ls-ME	IM-1345	Moon Enterprises, Inc.
685	Stark	Sk-M1	IM-1332	Massillon Materials, Inc.
686	Summit	St-DC	IM-1346	Donald A. Coy
687	Tuscarawas	Ts-MM	IM-1324	Massillon Materials, Inc.
688	Warren	Wan-MV	IM-1329	Miami View Mining Co., Ltd
689	Portage	Pe-BA	IM-1327	Ballentine Excavation Co.
690	Fulton	Ftn-H	IM-1336	Hunter Land Development

**NUMERICAL INDEX OF OPERATORS OF MINES
SHOWN ON 1999 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY — Continued**

SAND AND GRAVEL — Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mineral Resources Management permit number</i>	<i>Name of operator</i>
691	Tuscarawas	Ts-1982	IM-621	L & M Mineral Co.
692	Huron	Hrn-M	IM-1338	Marta Track Constructors, Inc.
693	Pike	Pke-M	IM-1325	Morrow Gravel Co.
694	Pike	Pke-V	IM-1330	Valley Materials Co.
695	Fairfield	Fd-VJ	IM-1339	Van Johnson Construction, Inc.
696	Fulton	Ftn-W	IM-1328	Wylie and Sons Landscaping
697	Fulton	Ftn-WY	IM-1339	Wylie and Sons Landscaping
698	Lucas	Ls-WY	IM-1321	Wylie and Sons Landscaping
699	Richland	Rd-TB	IM-1343	The Terry Byrne Mining Co.
700	Hamilton	Hmn-NB	IM-1337	New Baltimore CDD Landfill, Ltd.
701	Ashtabula	Asa-JS	IM-1360	Joe Simak & Sons Trucking
702	Athens	As-BT	IM-1350	Black Top Contracting, Inc.
703	Carroll	Cl-PD	IM-1352	Power Development Corp.
704	Clark	Ck-A	IM-1359	American Excavating, Inc.
705	Columbiana	Ca-XL	IM-1347	XL Sand & Gravel
706	Fulton	Ftn-W1	IM-2007	Wylie and Sons Landscaping
707	Knox	Kx-S	IM-2000	Small's Sand & Gravel, Inc.
708	Lucas	Ls-ST	IM-2001	Sandman Trucking, Inc.
709	Lucas	Ls-T	IM-2012	E. H. Taylor, Inc.
710	Portage	Pe-A	IM-1362	American Sand & Gravel, Inc.
712	Tuscarawas	Ts-S2	IM-1356	Sidco Development, Inc.
713	Washington	Wn-SS	IM-2006	Sharon Stone Co.

SANDSTONE/CONGLOMERATE ▼

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mineral Resources Management permit number</i>	<i>Name of operator</i>
4	Coshocton	Cn-13	IM-397	Briar Hill Stone Co.
5	Coshocton	Cn-659	IM-232	Briar Hill Stone Co.
6	Coshocton	Cn-686	IM-504	Briar Hill Stone Co.
7	Coshocton	Cn-692	IM-294	Briar Hill Stone Co.
8	Coshocton	Cn-695	IM-402	Briar Hill Stone Co.
13	Cuyahoga	Cya-42	IM-686	Boyas Excavating, Inc.
14	Erie	Ee-21	IM-416	Cleveland Quarries
17	Geauga	Gea-3	IM-89	Best Sand Corp.
18	Geauga	Gea-1	IM-163	R. W. Sidley, Inc.
19	Holmes	Hs-49	IM-418	Briar Hill Stone Co.
20	Huron	Hrn-8	IM-268	Mesenburg Bros., Inc.
23	Knox	Kx-12	IM-445	Briar Hill Stone Co.
24	Knox	Kx-1	IM-269	Oglebay Norton Industrial Sands, Inc.
27	Lorain	Ln-3	IM-415	Cleveland Quarries
30	Mahoning	Mg-62	IM-599	Gwin Contracting Co.
34	Ross	Rs-16	IM-172	Best Sand Corp.
36	Scioto	So-48	IM-140	Waller Bros. Stone Co.
37	Scioto	So-76	IM-141	Waller Bros. Stone Co.
38	Scioto	So-82	IM-158	Waller Bros. Stone Co.
41	Tuscarawas	Ts-1818	IM-9	Kimble Clay & Limestone Co.
42	Tuscarawas	Ts-1660	IM-68	U.S. Silica Co.
43	Washington	Wn-45	IM-125	Alan Stone Co., Inc.
44	Coshocton	Cn-815	IM-939	Briar Hill Stone Co.
45	Pike	Pke-31	IM-835	Best Sand Corp.
46	Coshocton	Cn-809	IM-909	Briar Hill Stone Co.
47	Columbiana	Ca-970	IM-1024	M & M Builders Supply Co.
48	Perry	Py-344	IM-1014	Oglebay Norton Industrial Sands, Inc.
49	Summit	St-24	IM-239	Riverside Sand & Gravel Co., Inc.
50	Geauga	Gea-N	IM-1123	Newbury Sand & Gravel
51	Belmont	Bt-1193	IM-1117	Alan Stone Co., Inc.
53	Mahoning	Mg-631	IM-1103	East Fairfield Coal Co.
54	Tuscarawas	Ts-2032	IM-1141	Slankard Dozer Service, Inc.
55	Tuscarawas	Ts-1982	IM-621	L & M Mineral Co.
56	Belmont	Bt-1190	IM-1089	Frank Widmor Coal Co., Inc.
57	Columbiana	Ca-888	IM-1181	D. & D. Mining Co.

**NUMERICAL INDEX OF OPERATORS OF MINES
SHOWN ON 1999 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY — Continued**

SANDSTONE/CONGLOMERATE — Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mineral Resources Management permit number</i>	<i>Name of operator</i>
58	Geauga	Gea-S	IM-161	R. W. Sidley, Inc.
60	Lake	Lke-K	IM-859	Keeney Sand & Stone, Inc.
62	Tuscarawas	Ts-1517	IM-46	Belden Brick Co.
64	Wayne	We-26	IM-690, IM-1210	Mt. Eaton Reclamation
65	Columbiana	Ca-982	IM-1108	Leetonia Sand & Gravel Co., Inc.
66	Lorain	Ln-14	IM-1205	Golden Cresent Construction, Inc.
68	Summit	St-60	IM-1206	Ohio Bulk Transfer Co.
70	Portage	Pe-9	IM-119	Oscar Bruggmann Sand & Gravel, Inc.
71	Tuscarawas	Ts-1841	IM-45	Belden Brick Co.
72	Columbiana	Ca-S	IM-1258	Solomon's Mines, Inc.
73	Scioto	So-BC	IM-1252	Boone Coleman Construction, Inc.
74	Wayne	We-EA	IM-1259	E. A. Construction, Inc.
75	Lorain	Ln-J	IM-1300	Johnson Stone Products, Inc.
76	Guernsey	Gy-S	IM-1306	R. G. Silvestri Enterprises
77	Trumbull	Tr-12	IM-131	Samco, Inc.
78	Tuscarawas	Ts-1646	IM-44	Belden Brick Co.
79	Gallia	Ga-VFL	IM-1304	Beaver Excavating Inc.
80	Washington	Wn-F	IM-1208	David L. Florence
81	Perry	Py-SU	IM-1340	Suburban South Recycling & Disposal Facility
82	Pike	Pke-S	IM-1348	Schrader & Sons, Inc.

CLAY/SHALE □

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mineral Resources Management permit number</i>	<i>Name of operator</i>
1	Ashland	Ald-1	IM-334	London Tile Co.
2	Auglaize	Ae-7		Sandkuhl Clay Works, Inc.
4	Columbiana	Ca-505	IM-13, IM-936	State Line Resources, Inc.
5	Columbiana	Ca-205	IM-74	Summitville Tiles, Inc.
6	Coshocton	Cn-787	IM-610	General Clay Products Corp.
7	Cuyahoga	Cya-19	IM-95	Hydraulic Press Brick Co.
10	Greene	Ge-8	IM-364	Southdown Inc.
11	Harrison	Hn-152	IM-42	Bowerston Shale Co.
17	Holmes	Hs-56		Clark Clay Inc.
19	Holmes	Hs-67	IM-3, IM-768	Holmes Limestone Co.
23	Jackson	Jkn-367	D-0594, D-0968, D-1083, D-892	Waterloo Coal Co., Inc.
31	Licking	Lg-501	IM-257	Bowerston Shale Co.
34	Mahoning	Mg-608	IM-4	ESSROC Cement Corp.
36	Marion	Mn-7	IM-309	Glen-Gery Corp.
37	Medina	Ma-6	IM-455	General Clay Products Corp.
38	Muskingum	Mum-776	IM-256	Bowerston Shale Co.
41	Noble	Ne-66	IM-664	Towne Square Products
42	Paulding	Pg-1	IM-513	Lafarge Corp.
53	Stark	Sk-217	D-0938	Republic Services, Inc.
56	Tuscarawas	Ts-1517	IM-46	Belden Brick Co.
57	Tuscarawas	Ts-1646	IM-44	Belden Brick Co.
58	Tuscarawas	Ts-1841	IM-45	Belden Brick Co.
59	Tuscarawas	Ts-1939	IM-47	Belden Brick Co.
60	Tuscarawas	Ts-1960	IM-48	Belden Brick Co.
63	Tuscarawas	Ts-1818	IM-9	Kimble Clay & Limestone Co.
64	Tuscarawas	Ts-1884	IM-6	L & M Mineral Co.
65	Tuscarawas	Ts-1914	D-0701	L & M Mineral Co.
67	Tuscarawas	Ts-1557, Ts-1558	IM-52	Stone Creek Brick Co.
71	Tuscarawas	Ts-540	IM-28	Zoar Mining Co.
73	Wyandot	Wt-7	IM-407	General Clay Products Corp.
76	Stark	Sk-235	D-865	Holmes Limestone Co.
77	Tuscarawas	Ts-1982	IM-621	L & M Mineral Co.
79	Columbiana	Ca-947	IM-935	Dome Minerals, Inc.
81	Athens	As-594		Athens Hocking Reclamation Center
82	Ashtabula	Asa-14	IM-563	Janson's Soil Service, Inc.
85	Tuscarawas	Ts-520	IM-214	Blue Jay Enterprises of Ts. Co., Inc.
86	Geauga	Gea-9	IM-132	Soltis Sand & Gravel
87	Athens	As-595	IM-1083	Cochran Transportation Services, Inc.
88	Coshocton	Cn-828	IM-1026	William Albert, Inc.
89	Erie	Ee-32	IM-1077	Speer Brothers, Inc.

**NUMERICAL INDEX OF OPERATORS OF MINES
SHOWN ON 1999 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY — Continued**

CLAY/SHALE — Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mineral Resources Management permit number</i>	<i>Name of operator</i>
90	Greene	Ge-44		Southdown Inc.
92	Lake	Lke-M	IM-1059	Mitchell Transport, Inc.
93	Lawrence	Le-B	IM-1188, D-0746	Belville Mining Co., Inc.
99	Pike	Pke-26	IM-142	Valley Materials Co.
101	Preble	Pre-9	IM-1095	Loxley Aggregates, Inc.
105	Belmont	Bt-1190	IM-1089	Frank Widmor Coal Co., Inc.
106	Columbiana	Ca-970	IM-1024	M & M Builders Supply Co.
107	Mahoning	Mg-EM	IM-1056	ESSROC Cement Corp.
108	Perry	Py-338	IM-1092	Bear Creek Clay Co.
109	Harrison	Hn-B	IM-1020	Bowerston Shale Co.
110	Hocking	Hg-330	IM-1013	General Clay Products Corp.
111	Holmes	Hs-96	IM-997	Spring Run Gravel
114	Richland	Rd-R	IM-1035	Richland Moulded Brick Co.
116	Portage	Pe-61	IM-1064	Red Brush Peat Co.
118	Mahoning	Mg-631	IM-1103	East Fairfield Coal Co.
122	Muskingum	Mum-904	IM-1127	Valley Clay Mining Co.
123	Stark	Sk-246	IM-1114	American Landfill, Inc.
128	Athens	As-533	IM-17	Waterloo Coal Co., Inc.
130	Columbiana	Ca-348	IM-976	D. & D. Mining Co.
135	Mahoning	Mg-632	IM-808	Solomon's Mines, Inc.
136	Ottawa	Oa-19	IM-1153	Brush Wellman, Inc.
137	Perry	Py-344	IM-1014	Oglebay Norton Industrial Sands, Inc.
138	Perry	Py-S1	IM-1183	Swingle Drilling, Inc.
144	Wayne	We-26	IM-690, IM-1210	Mt. Eaton Reclamation
145	Jackson	Jkn-CH1	IM-1182	Cedar Heights Clay Co.
146	Stark	Sk-247	D-0929	Buckeye Industrial Mining Co.
147	Tuscarawas	Ts-B	IM-49	Belden Brick Co.
148	Knox	Kx-K	IM-870	Board of Knox County Commissioners
150	Ross	Rs-T	IM-1189	Tackett Builders
151	Tuscarawas	Ts-H1	IM-927	Holmes Limestone Co.
152	Washington	Wn-1010	IM-1163	M & J Sand & Gravel
153	Champaign	Cpn-20	IM-482	Moore's Excavating Co.
155	Fairfield	Fd-16	IM-1156	James E. Downard
156	Lucas	Ls-13	IM-492	Seaway Sand & Stone, Inc.
157	Montgomery	My-CW	IM-878	Carter & Carter, Inc.
158	Montgomery	My-W	IM-1207	Weidle Sand & Gravel, Inc.
161	Portage	Pe-89	IM-1142	Green Oaks Potting Products, Inc.
162	Stark	Sk-BE	IM-1202	Beaver Excavating, Inc.
163	Washington	Wn-F	IM-1208	David L. Florence
164	Columbiana	Ca-888	IM-1181	D. & D. Mining Co.
165	Wayne	We-25	IM-1209	Craigton Shale Co.
166	Ashtabula	Asa-18	IM-949	Joe Simak & Sons Trucking, Inc.
171	Hocking	Hg-G	IM-1201	Good Builders
173	Perry	Py-V	IM-1245	Valley Clay Mining Co.
174	Stark	Sk-K	IM-1236	Koch-Glitsch, Inc.
177	Tuscarawas	Ts-BB	IM-1221	Belden Brick Co.
178	Columbiana	Ca-987	D-0928	Buckeye Industrial Mining Co.
179	Wayne	We-11	IM-547	Prairie Lane Sand & Gravel Co.
181	Coshocton	Cn-JT	IM-1253	Oxford Mining Co., Inc.
182	Lawrence	Le-PH	IM-1268	P & H Construction
184	Trumbull	Tl-12	IM-131	Samco, Inc.
185	Wayne	We-EA	IM-1259	E. A. Construction, Inc.
186	Columbiana	Ca-BIM	IM-1271	Buckeye Industrial Mining Co.
188	Harrison	Hn-CD	D-1105	Waste Management/Chambers Development of Ohio, Inc.
189	Stark	Sk-BI	D-1043	Buckeye Industrial Mining Co.
190	Hamilton	Hmn-72	IM-1264	Rumpke Mountain Mining Co.
193	Wayne	We-15	IM-398	Zollinger Sand & Gravel Co.
194	Columbiana	Ca-S	IM-1258	Solomon's Mines, Inc.
195	Jackson	Jkn-CH2	IM-1302	Cedar Heights Clay Co.
197	Noble	Ne-S	IM-913	Sharon Stone Co.
198	Ottawa	Oa-BF	IM-1287	Browning-Ferris Industries of Ohio, Inc.
199	Portage	Pe-101	IM-1154	D & K Materials, Inc.
200	Stark	Sk-B	D-1123	Buckeye Industrial Mining Co.
201	Tuscarawas	Ts-BJ	IM-1285	Blue Jay Enterprises of Ts. Co., Inc.
202	Gallia	Ga-VFL	IM-1314	Beaver Excavating, Inc.

**NUMERICAL INDEX OF OPERATORS OF MINES
SHOWN ON 1999 MINERAL INDUSTRIES MAP OF OHIO, BY COMMODITY — Continued**

CLAY/SHALE — Continued

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mineral Resources Management permit number</i>	<i>Name of operator</i>
203	Stark	Sk-208	D-1015, D-1144	ENZ, Inc.
204	Portage	Pe-84	IM-868	Twinsburg Development Corp
205	Perry	Py-D1	IM-1304	Bear Creek Clay Co.
206	Fairfield	Fd-VJ	IM-1339	Van Johnson Construction, Inc.
207	Madison	Mdn-11	IM-1063	Tuffco Sand & Gravel, Inc.
208	Mahoning	Mg-54	IM-93	Honey Creek Stone Co.
209	Mercer	Mr-C	IM-1341	Countryside Waste Services, Inc.
210	Muskingum	Mum-L	IM-1344	Luburgh, Inc.
211	Portage	Pe-18	IM-193	Sober Sand & Gravel Co.
212	Portage	Pe-1332	IM-1332	Patrick Excavating, Inc.
213	Perry	Py-SU	IM-1340	Suburban South Recycling & Disposal Facility
214	Huron	Hrn-M	IM-1338	Marta Track Constructors, Inc.
216	Hamilton	Hmn-NB	IM-1337	New Baltimore CDD Landfill, Ltd.
217	Defiance	De-3	IM-1351	General Motors Power Train
218	Franklin	Fn-SW	IM-1354	Solid Waste Authority of Central Ohio
219	Greene	Ge-W	IM-645	Joann O. Weddle
221	Putnam	Pm-P	IM-2002	Putnam County Board of Commissioners
222	Stark	Sk-BIM	IM-1361	Buckeye Industrial Mining Co.
223	Williams	Ws-N	IM-1291	Andy Nixon Contractors, Inc.
224	Wyandot	Wt-CD	IM-2016	County Disposal (Ohio), Inc., dba County Environmental of Wyandot
225	Lucas	Ls-12	IM-953	Barrett Paving Materials, Inc.

SALT ■ ■

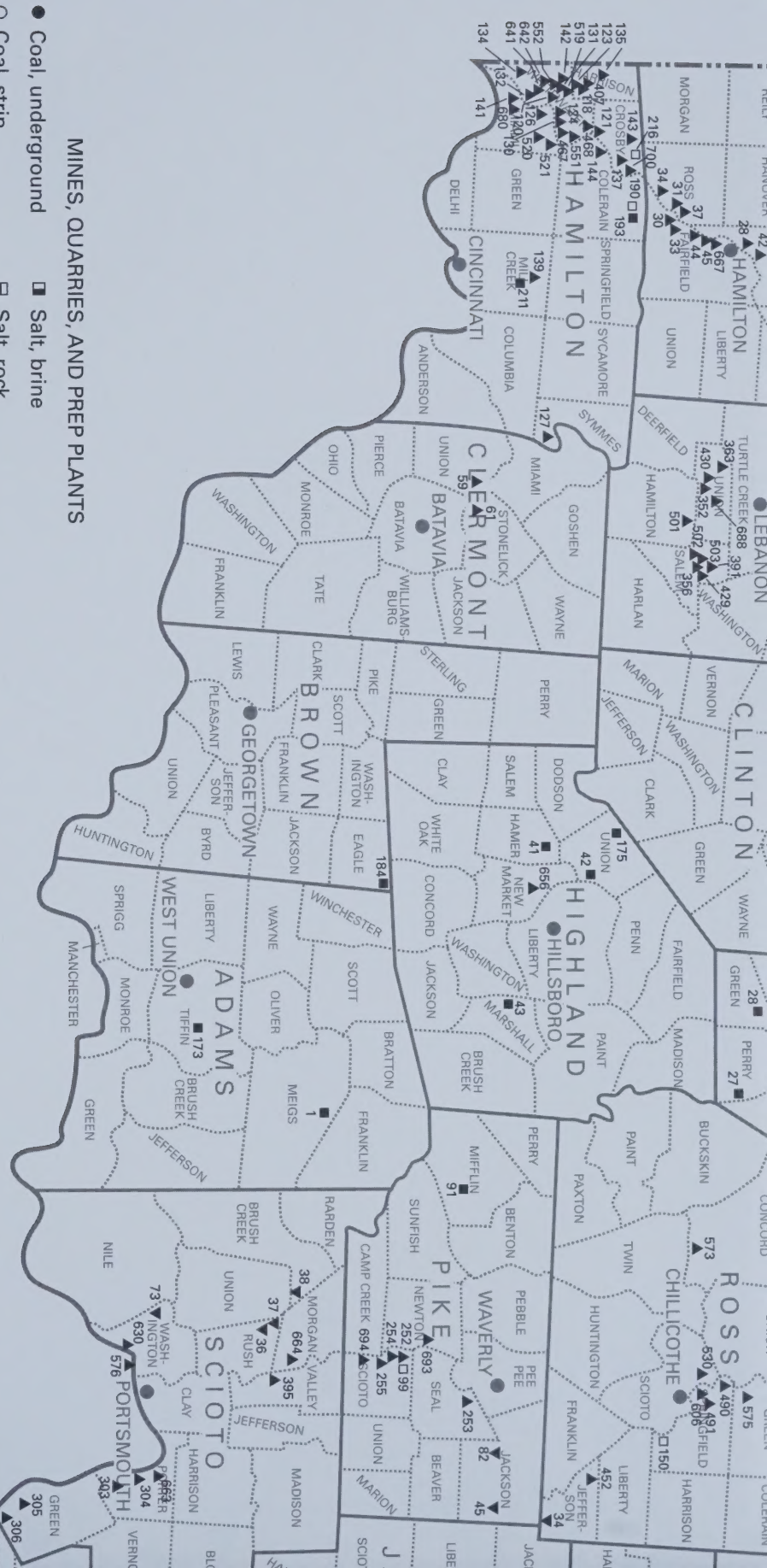
<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mineral Resources Management permit number</i>	<i>Name of operator</i>
1	Cuyahoga	Cya-30		Cargill Incorporated
2	Lake	Lke-6		Morton International, Inc.
3	Licking	Lg-45		R. H. Penick Co.
4	Summit	St-9127		Cargill Incorporated
5	Wayne	We-9129		Morton International, Inc.

GYPSUM ◆

<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mineral Resources Management permit number</i>	<i>Name of operator</i>
1	Ottawa	Oa-2	IM-344	Celotex Corp.

PEAT ◇

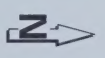
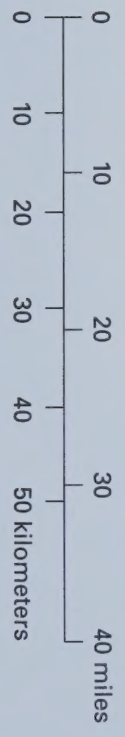
<i>Map location number</i>	<i>County</i>	<i>State mine number</i>	<i>Division of Mineral Resources Management permit number</i>	<i>Name of operator</i>
2	Champaign	Cpn-9		Sphagnum Moss Peat Farm
4	Williams	Ws-17		Lingvai Peat Co.
7	Portage	Pe-89	IM-1142	Green Oaks Potting Products, Inc.
9	Portage	Pe-61	IM-1064	Red Brush Peat Co.
10	Montgomery	My-41	IM-360	Moraine Materials Co., Inc.



MINES, QUARRIES, AND PREP PLANTS

- Coal, underground
- Coal, strip
- ◆ Coal, prep plant
- Limestone/dolomite
- ◇ Peat
- ▣ Salt, brine
- ▤ Salt, rock
- ▲ Sand and gravel
- △ Sand and gravel dredging operation
- ▼ Sandstone/conglomerate
- Clay/shale

Locations are approximate. Numbers opposite symbols are map-location numbers assigned to operators listed in the alphabetical directories of the Division of Geological Survey's *Report on Ohio mineral industries*. The operator of a mine or quarry may be determined from the directories by use of the map-location commodity symbol, number, and county name. A list of operators by commodity and map-location number is also provided.





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0 10 20 30 40 miles
0 10 20 30 40 50 kilometers

Cartography by Lisa Van Doren
Updated by Robert L. Stewart, Sr.

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